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Gleanings in Bee Culture

VOL. XXXVIII

AUGUST 15, 1910

NO. 16

Editorial

Stray Straws

Siftings

Bee-keeping in The Southwest

Conversations with Doolittle

An Uncapping-can of Unlimited Capacity

O. B. METCALF

Is There a New Bee Disease?

E. F. ROBINSON

Shaking Bees; by One Who has "Shook 'em"

WALTER S. PODER

Sub-earth Ventilation of Bee-cellars

S. T. PETTIT

Comb Honey Produced without Separators

NELSON M. GOOD

The Results of Vertical and Horizontal Wiring

E. R. ROOT

Bees Carrying Eggs to Rear Brood

W. T. BRAND

Transferring from a Bee-tree without Cutting the Tree

GEO. W. BEARD

Bee-keeping in California

MRS. H. G. ACKLIN

Island Bee-keeping in Florida

M. L. BREWER

An Uncapping-table for Extensive Producers

E. M. GIBSON

A New System of Wax-rendering

WESLEY FOSTER

Selling Honey to the Retail Trade

C. B. SNAVELY

Can the Swarming Tendency be Eliminated?

M. E. PRUITT

Can Bee-stings Cure Rheumatism?

DR. A. F. BONNEY

Was it American or European Foul Brood?

GEO. M. STEELE

Heads of Grain

Our Homes Notes of Travel Poultry Department



A New Bee-book!

WE ARE fortunate in securing from the publishers just at this season a new book on bee culture, entitled "How to Keep Bees for Profit." It covers a field quite new in that it gives information to beginner and experienced bee-keeper alike, and covers all conditions, for the man who keeps but a colony or two in his back yard, and the one who numbers his colonies by the hundred and has outyards. A list of the phases of the subject covered will give you an idea of the real value of the book. They are as follows:

Chapter	1	Bees, Fruit, Honey, and Money.
"	2	Physiology of the Honey-bee.
"	3	Races of Bees.
"	4	The Home of the Bees.
"	5	The Bee Family.
"	6	How to Start Bee-keeping; Hives and Tools; Transferring Bees.
"	7	How to Quiet and Handle Bees; How to Avoid Stings; Remedies.
"	8	Why Bees Swarm; How to Hive a Swarm; How to Control Swarming.
"	9	Raising Queen Bees; How to Introduce a Queen.
"	10	How to Produce Comb Honey.
"	11	How to Produce Extracted Honey.
"	12	How to Make Increase.
"	13	Location of the Aplary; Out-apiaries; Moving Bees.
"	14	Diseases and Enemies of Bees.
"	15	Marketing the Honey-crop.
"	16	Beeswax; Its Uses; How to Render it.
"	17	Honey as a Food and Medicine.
"	18	Robber Bees; How to Prevent Robbing.
"	19	Feeding.
"	20	How to Winter Bees Successfully.
"	21	Sources of Honey

The book is so arranged that one may refer to the particular subject wanted without reading a lot of matter in which he has no immediate interest. The author is a practical bee-keeper, and writes in a simple manner which can not but be understood by the veriest novice, and is at the same time a convincing argument for the more advanced bee-keeper. The book contains 325 pages, and is fully illustrated by engravings which show details of the work at every step. No bee-keeper's library is complete without this book. Sold only in connection with a year's subscription to GLEANINGS IN BEE CULTURE. \$1.50 for the combination. If you are already a subscriber we will advance your subscription a year and send the book at once on receipt of the price. Get it NOW so that you may profit by its teachings this season.

THE A. I. ROOT CO., Medina, Ohio:

For the enclosed \$1.50 please send me at once one copy of HOW TO KEEP BEES FOR PROFIT, and enter my name for a year's subscription to GLEANINGS IN BEE CULTURE.

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WEDDING BELLS.

THE editor of the *American Bee Journal* was married to Miss Grace Hitchcock, of Kingston, Ill., July 2. GLEANINGS extends its best wishes and congratulations. Mr. and Mrs. York expect to attend the National convention at Albany, Oct. 12 and 13.

A CARLOAD OF BEE-KEEPERS TO THE NATIONAL CONVENTION.

In this connection we should mention the fact that Bro. York is getting up a carload of bee-keepers to go together to Albany from Chicago over the L. S. & M. S. Further details will be given later. Arrangements will doubtless be made for bee-keepers in the vicinity of Toledo and Cleveland to join the Chicago bunch. It will be a jolly crowd. We suggest that those who think they can attend the Albany convention and would like to join this crowd, notify Geo. W. York, 146 West Superior St., Chicago.

Hotel Kenmore, near the Union Station, at Albany, has been selected as headquarters of the convention. The meeting will be held in the Council Chamber of the City Hall, Albany.

EUROPEAN AND AMERICAN FOUL BROOD; SHOULD THESE NAMES BE SHORTENED?

ELSEWHERE in this issue, in one of the Straws, Dr. Miller suggests that the names "European foul brood" and "American foul brood" be shortened to "yellow brood" and "foul brood." While the qualifying adjective *yellow* would be more accurate than "black" as describing the European type of the disease, yet it is not accurate for all stages of that malady. When Dr. Phillips suggested the qualifying adjectives "American" and "European" he did so that he might retain the name "foul brood" for both diseases. In view of the fact that many of our State laws mention only foul brood, and no other disease, it would have been a serious mistake to adopt a new name that would have eliminated from the action of our laws one of the most serious diseases that ever got into this country. When we say American foul brood or European foul brood we use names that will be included in any State law. We have already tried to adopt two different names for the disease that first made itself manifest in New York.

To attempt to adopt still another name at this stage of proceedings would be a serious mistake. Already confusion exists, and to throw in the third name would be to make confusion worse confounded. If we continue to use the names "American" and "European" we shall soon have the atmosphere cleared up. One of the leading bacteriologists of Europe not only has confirmed the findings of Dr. White, of the Bureau of Entomology, but has adopted the names European and American foul brood. Some 30,000 copies of the A B C and X Y Z of Bee Culture recognize these names, besides all the government bulletins and thousands and thousands of pages of current bee literature. Even if it were possible to adopt the name "yellow brood," only one word is saved, and that word can not be a very serious tax on the publisher and his correspondents. Let us stick to these names and thus avoid further confusion.

THE STRENGTH OF THE HONEY-FLOW AND ITS INFLUENCE ON THE SWARMING PROBLEM AND QUEEN-CELL BUILDING.

SOME years ago, when we were in Texas, we were quite surprised to learn that the bee-keepers of that section of the country were not troubled very much with swarming *after* the honey-flow had gotten well under way; but they do have plenty of it during the preliminary honey-flows when the yield of nectar is light; but after the mesquite and guajilla come on, the honey-flow is strong enough to stop swarming altogether. Mr. Chalon Fowls, of Oberlin, Ohio, has observed quite the same thing—that a light flow is apt to cause furious swarming, while a heavy one will check it if not stop it altogether. It would, therefore, be apparent that, when there is plenty of honey to be had, the main idea of a colony is to gather honey, not to increase.

We have an exemplification of this fact at one of our queen-rearing yards where we have a number of what we call cell-building colonies. Just before the honey-flow, and when we were feeding these cell-builders, he could get all the cells he desired; but after the honey-flow began, it was so heavy that each of them was surfeited with honey. What happened? Cell-building stopped immediately. Said Mr. Pritchard, "When there is a heavy honey-flow I can't do as much with our cell-builders; and this explains, Mr. Root, why I can not deliver to you as many queens a day as when the

honey-flow is light or when there is no flow at all. I don't want a heavy yield of nectar for cell-building. I should, in fact, very much prefer to have no honey come in at all, because then I can *regulate* the supply of food just fast enough, and no more, to keep cell-building at its best."

SOME EXPERIENCES OF THE EDITOR IN FOUL-BROOD-INSPECTION WORK.

DURING the last few days we have been getting some real experience in helping out the Ohio foul-brood inspectors. We have driven from 40 to 75 miles in a day with a machine, carrying the inspectors about from bee-keeper to bee-keeper. If there is any one fact that was impressed on us it is this: That foul brood finds an easy lodging-place among the old-fashioned bee-keepers, who either have box hives or old hives of an antiquated pattern—so old, in fact, that there are cracks all over them. Of course, some of these farmers do not take any bee-paper, and they probably do not even read the aparian department in their agricultural papers, if they read any paper at all.

At two or three yards we found where the bees had died the previous winter. Examination showed the characteristic scales of foul brood on the combs. The bees had, no doubt, been so weakened by the ravages of this disease during the previous summer and fall that they were unable to withstand the winter's cold. The result was, there were several hives in the spring containing honey in the combs, with no live bees in. Neighboring bees found these hives, of course, and robbed them out and thus scattered foul brood right and left. We ran into one section where fully 99 per cent of the farmers had foul brood among their bees; and we found not a few of them having empty hives with foul-brood combs in them, all of which gave evidence of having been robbed out the previous spring. No wonder their cry was, "Bees don't pay like they used to." In every case the farmers were willing to be shown what to do, and to comply with the provisions of the Ohio law, and scarcely one of them knew he had the disease.

THE GRADUAL ELIMINATION OF THE OLD-FASHIONED FARMER BEE-KEEPER.

We have about come to the conclusion that American and European foul brood will eliminate the don't-read-the-paper class of farmer bee-keeper. It may take several years before it is accomplished; and while we are sorry to have these people suffer loss, the result will be very salutary to the specialist and progressive farmer bee-keeper who read the papers. American foul brood has no terrors for the specialist bee-keeper; but the ignorant and haphazard farmer bee-keeper must either burn up or otherwise destroy all his old hives and fixtures. European foul brood is much more difficult to eradicate; but we feel confident that, when we come to know more about it, the expert will handle one as well as the other.

A PRACTICAL SCHEME FOR KEEPING DOWN SWARMING AT AN EXTRACTING-YARD; DO BROOD-COMBS AFFECT THE COLOR OF HONEY TAKEN FROM THEM?

As a general rule, it is not difficult to handle swarms at extracting-yards; but under some conditions, at least, there will be some swarming, especially if moderate-sized hives are used. In helping (?) Mr. Fowls to extract, as mentioned on page 474 in last issue, we noticed a good many of his combs that had brood reared in them to a greater or less extent. We asked him if these did not have a tendency to darken his honey. "No," he replied, "not nearly so much as I had expected. In reading over recent articles in some of the bee-papers, I noticed that one or two writers said they had been very successful in keeping down swarming at the extracting-yards by letting the queen have access to the extracting-supers during the *fore part* of the honey-flow; then, as the season advanced, putting on honey-boards to confine the queen to the lower chamber. In the mean time brood hatches in the extracting-supers, when the cells are immediately filled with honey. This," continued Mr. Fowls, "practically eliminates all swarming. I have been testing this the past season or two, and I find it works admirably. I have not been able to find that brood-combs affect the color of the honey if they are not too old and black. What is more, the cocoons in the cells stiffen the combs, and this is quite an advantage while extracting and uncapping. These reinforced cells during the process of uncapping make it easy, as you see, to slice off the cappings."

Mr. Fowls went on to explain that most of the swarming takes place at the fore part of the season. If the queen has unlimited room at that period of the flow there is not likely to be any swarming. This has been our experience at Medina, at least. "Now, then," said Mr. Fowls, "if the honey-boards are put on when the honey-flow is at its height, the brood hatches out, the cells are filled with honey, and at the close of the season we have nothing but solid combs well capped."

It should be remembered that Mr. Fowls is a bottler of fine honey, and takes pride in having his goods look clean and bright. It would be apparent that he could not tolerate any plan of extracted-honey production that would darken his honey. As we have been "helping" him to extract a number of times, we can bear testimony to the fine quality of his honey.

THE ADVISABILITY OF PUBLISHING NEW METHODS OF CURE FOR THE BROOD DISEASES.

ONE of our best correspondents, and also a foul-brood inspector, seriously questions the advisability of publishing these new methods of cure for brood diseases. He refers particularly to the articles by Henry Stewart, given on pp. 415, 445. He says that

in his vicinity bee-keepers, instead of following his instructions, will follow those made by Mr. Stewart; and if that treatment is not effective it will only delay the elimination of disease or its control. We admit that there is some force in his argument. On the other hand, it is the province of a trade journal to discuss some of these new methods of cure; otherwise we should make no progress. Henry Stewart is one of the best bee-keepers in the country; and he claims to have given his treatment a thorough trial. The old McEvoy treatment is somewhat expensive, and involves a large amount of work, and under some conditions it interferes with securing a crop of honey. In every case it means the loss of a lot of good brood. The Baldridge treatment and the Stewart treatment will save all this brood. At the same time, the bees go on uninterrupted securing a crop of honey.

On page 531 Mr. Geo. M. Steele questions whether Mr. Stewart really had American foul brood. Mr. Steele and a good many others who have had experience with brood diseases, are very emphatic in saying that larvae diseased with American foul brood can not be cleaned out of the cells, nor can the combs be made safe to use again. E. W. Alexander was also of this opinion. Mr. Stewart then stands alone, apparently, in his belief. We should be glad to hear further from Mr. Stewart as to whether he is positive that the disease in question is American and not European.

Right here the question may be raised whether we did the wise thing in publishing the Alexander treatment for European foul brood. Alexander claimed that he drove the disease entirely out of his yard. In looking over his apiary of over 700 colonies a year after we can personally testify to the truth of the statement. But the question has arisen in the minds of some whether the disease had not already run its course in that vicinity. Possibly. But Dr. Miller, in some recent correspondence, is inclined to feel that there is a great deal of merit in the Alexander treatment, and says there is no European foul brood, or at least very little of it, in his yard.

Now, then, through careful and wisely conducted discussions and experimentation on the part of those competent to do the work we may get hold of some simpler and cheaper treatment for these diseases. The facts are that European and American foul brood are spreading over the United States in spite of the McEvoy treatment. One State inspector, with an excellent law back of him, wrote us a few days ago, stating that he was somewhat discouraged over the outlook; that, do every thing he could with his corps of inspectors, the diseases were raging as strongly as ever. Then incidentally he mentioned that the McEvoy treatment was expensive, and many bee-keepers were disinclined to follow instructions, and others made bungling work of it. If we can get a treatment that is better, should we not make the effort to do so?

CROP REPORTS.

THE reports of the honey-crop that have come in since our last issue have been more and more conflicting. The fact that widely differing reports are received from the same State shows that local conditions affect the honey-flow considerably, and that only a few hundred miles from a locality visited by a drouth there may be bountiful rains. We realize that two or three reports for a whole State do not tell the whole story by any means. The ideal way, perhaps, would be to have local associations, possibly the State associations, collect reports from their members, and then send summaries of these reports to the bee-journals for publication. In this way a much more accurate and true statement of actual conditions could be revealed. A good many bee-keepers do not seem inclined to make public the extent of their crop; but although we do not believe it is a good plan to exaggerate the prospect for a crop (see p. 526), we believe the only fair way to all concerned is to make public the extent of the honey crop over the country as soon as it can be determined with any degree of accuracy.

It now looks as though California would have a very light crop. In Idaho and Nevada there will probably be good average crops. In certain sections of Colorado there will be a fair to average crop; but as a State, Colorado's crop will be light. In New York the reports, most of them, indicate a good crop. We will let the reader draw his own deductions from the following somewhat scattering reports that have been received during the last two weeks. A part of them, as will be seen, are in answer to the following questions:

1. Condition of bees?
2. Climatic conditions (favorable or not)?
3. Are bee-men suffering from drouth or wet weather?
4. Prospects for honey crop?
5. Compare prospects with last year, same date.
6. Percentage of full crop harvested to date?
7. Compare yield with last year, same date.
8. Kind of honey produced in your locality, comb or extracted?
9. Color of honey produced this year?
10. Price local dealers are paying for honey?
11. Price bee-men are holding for?
12. Is the crop moving readily?

Honey crop a total failure this season. Last year my two yards gave an average of 208 lbs. per colony, 99 per cent of which was extracted and the rest comb honey.

Paicines, Cal.

No rains this season, but honey is being extracted just the same. Can not tell where it comes from. Cranbrook, B. C., Can.

1. good; 2. favorable; 3. yes; 4. good for this particular locality; 5. better; 6. 100 lbs. per colony; 8. extracted; 9. light; 10. 10 cts. per lb.; 11. don't know; 12. local trade good.

Bobeagron, Ontario, Can.

1. fair; 2. too wet; 3. wet weather; 4. rather poor; 5. not half as good as last year; 6. 50 per cent of comb; 7. same as last year; 8. both comb and bulk comb honey; 9. white to dark.

Lawrenceville, Ga.

Average honey-flow here, but in some parts it will be much below.

Parma, Idaho.

Good crop.

Boise Valley, Idaho.

1, good; 2, at first unfavorable but favorable now; 3, neither; 4, fairly good; 5, much better; 6, about 60 per cent; 7, three times as much this year; 8, comb honey; 9, white; 10, not buying at present; 11, 15 cts.; 12, slow.

Beardstown, Ill.

1, very good; 2, very dry, otherwise fine; 3, very dry—every thing dried up; 4, probably half a crop; 5, much better than last year; 6, about 60 per cent; 7, about 80 per cent better; 8, very little produced, but mostly comb; 9, white; 10, 15 to 16; 11, very little here—about enough for the home trade.

Genoa, Ill.

1, poor to good; 2, too wet; 3, wet weather; 4, not very good; 5, not a pound stored in the supers yet; 6, nothing; 7, last year the same; 8, comb; 10, 15 to 20 cts. per lb.; 11, about 20 cts.; 12, no crop to move. The prospect from goldenrod is good. We have also smartweed and Spanish needle in the fall.

Percy, Ill.

1, splendid; 2, same till middle of July; too dry since then; white clover all dried up; 3, yes; 4, 100 lbs. from swarm hived May 10 on full sheets of foundation; will finish up 200 lbs. of comb honey if it rains; 5, 1909 poor year; 6, 80 per cent; 7, not much to compare; 8, both clover and white, catnip, amber; 10, comb, 20 cts.; extracted, 12½; 11, same; 12, yes. Jonesboro, Ind., Aug. 6.

The honey crop here is light—only about 40 per cent; and honey is so thick it is almost a nuisance to work with it. It is the thickest clover honey I have ever had to extract in my experience of thirty-five years.

Cascade, Iowa.

1, fine; 2, favorable; 3, good in the eastern part of the State; 4, no prospects; 5, good prospects last year; 6, none; 7, 90 per cent poorer; 8, comb and very little of it; 10, 12 to 17 cts.

Ossawatomie, Kan.

1, good; 2, July, wet; 3, bees are suffering from wet; 4, about a fourth of a crop; 5, better than last year; 6, about one-fourth—flow is over; 7, better than last year; 8, comb honey; 9, water-white; 10, 14 cts.; 11, 15 cts.; 12, slow.

Brookville, Ky.

1, very good; 2 and 3, much rain in May and June, but less in July; 4, white clover very abundant; 8, extracted with some bulk comb honey; 9, clear amber; 10, 15 cts.; sold in bottles from milk-wagon at 40 cts. a quart; 12, crop promptly disposed of. I have been educating our customers to buy extracted honey at a good price.

Hopkinsville, Ky.

1, poor; 2, good; 3, drouth; 4, fair; 5, two-thirds; 6, two-thirds; 7, two-thirds; 8, extracted; 9, white and very thick; 10, 9½ cts.; 11, 9½ cts.; 12, yes.

Marion, Mich.

No honey this year. Worst season ever known. Fergus Falls, Minn.

About 2500 lbs. extracted honey from 40 weak colonies, and increased to 63 colonies. Season would have been good if there had been more rain.

Mora, Minn.

I had 5220 lbs. of extracted honey from 77 colonies, and 1000 lbs. more on the hives ready to come off. Raymore, Mo.

1, good; 2, yes, very much so; 3, no drouth at any time; 4, white clover is over; 100 to 200 lbs.; 5, better; 6, 7½; 7, 50 to 100 lbs. better; 8, both; 9, white, the very best; 10, 9 and 10; 11, no holding here; 12, yes.

Marcelline, Mo.

Frost first five nights in June, then hot and dry, and every thing dried up; no honey in alfalfa; will have to feed for winter—the first real failure I have seen in this country.

Lewistown, Mont.

Weather very dry and hot. Honey-flow light except in localities having much alfalfa.

Humboldt, Neb.

Some white clover showing since last rain, but honey-flow is not large this year. Canandaigua, N. Y.

Honey-flow best in three years.

Middle town, N. Y.

1, fair to good; 2, too dry; 3, drouth; 4, short; 5, about one-fourth crop; 6, can't tell; 7, better than last year; 8, comb and some extracted; 9, white clover with no honey-dew as yet; 10, 16 cts. wholesale; 11, can't tell; 12, fairly well.

Mechanicsburg, Ohio.

1, good; 2, favorable; 3, too dry; 4, poor prospects; same last year; 6, very light crop; 7, same last year; 8, comb honey; 11, 15 to 20 cts.; 12, yes.

Gaston, Oregon.

1, medium; 2, favorable; 3, neither; 4, very poor; 5, about half as much; 8, both; 9, white. We have had two seasons of drouth, but prospects for 1911 are better.

Bradford, Pa.

Bees have done very little. No surplus honey at all, and have had to feed. If we have rain we shall get some honey from buckwheat.

Dayton, Pa.

White-honey crop very short, but better than last year.

Erwinna, Pa.

Wonderful honey-flow for the last five or six weeks. Splendid crop of white clover. Warm showers every few days.

Jullian, Pa.

Honey crop almost a failure because of too little rain since the 28th of May. No prospects for further flow as yet.

Sabinal, Texas.

1, good; 2, good until June and bad ever since; 3, drouth; 4, bad; 5, none; 6, 25 per cent; 7, none; 8, 75 per cent extracted, 25 per cent comb; 9, white; 10, 10 cts.; 11, don't know; 12, yes.

Vigo, Texas.

Honey-flow best on record to date, with good prospects for the rest of the season.

Heber, Utah.

Honey crop almost entire failure on account of cold weather in May and June.

Hiltons, Va.

Half a crop of honey.

Markham, Va.

1, good; 2, favorable; 3, neither; 4, not very good, as white clover did not yield on account of too much rain while it was in bloom; prospects from sumac very good; 4, about the same; 6, don't know; 7, not as good as last year; 8, comb honey; 9, white; 10 and 11, don't know; 12, no crop to move.

Paige, Va.

1, good; 2, good at first, then bad; 3, both; 4, poor; 5, about two-thirds; 6, about one-half crop; 7, about two-thirds as much; 8, comb; 9, white at first, and the rest dark; 10, about 10 cts.; 11, all they can get; 12, yes, although very light for shipment except for local trade.

Washington, Va.

Half a crop.

Seattle, Wash.

Honey crop good, and of excellent quality. We shall have better than the average yield.

North Yakima, Wash.

1, never better; 2, favorable; 3, rather dry; 4, never better; 5, 100 per cent better; 6, extra crop harvested to date; 7, double that of last year; 8, extracted; 9, very light with no dark honey; 10, 8 to 9 cts. for extracted, 16 for comb; 11, no honey being held; 12, fairly active.

Wallula, Wash.

One-third of a crop. No rain since May 15. Forest Junction, Wis.

1, good; 2, not; 3, drouth; 4, poor; 5, 25 per cent; 6, 90 per cent; 8, extracted; 9, white; 11, 9 cts.; 12, no honey on the market.

Loyal, Wis.

1, below average; 2, unfavorable; 3, extreme drouth; 4, poor; 5, not as good; 6, one-third crop of comb, no extracted this year; 7, small; 8, both; 9, white; 10, commission men selling at 20 cts. with 10 per cent commission; 12, yes.

Milwaukee, Wis.

Honey crop almost total failure.

Mount Horeb, Wis.

Honey crop scant; 2000 lbs. secured from 35 colonies; last year 1500 lbs. from the same number of colonies; two years ago, 5000 lbs.

Random Lake, Wis.

Stray Straws

By DR. C. C. MILLER, Marengo, Ill.

THE SHUT-DOWN of clover, July 10, was for keeps, leaving only half the crop I expected. Drouth here is terrible, although it rains all about.

BIENEN-VATER, p. 166, gives a picture of "An American Apiary in Hungary." It belongs to Karl R. Mathey, formerly a sojourner at Medina, and special mention is made that from a single Langstroth hive he harvested 286 pounds of honey—presumably extracted.

IF FOUNDATION can be profitably dispensed with at any time, one would suppose it would be in producing bulk honey. But Louis Scholl says, *American Bee Journal*, 188, that he has learned that it *pays big* "to use full sheets of foundation at all times, both in supers and brood-chambers."

IT HAS BEEN SAID that, in a state of nature, bees always build comb with an angle of the cells pointing downward. Two writers, *Leipz. Bztg.*, 95, dispute this. One very deep comb started with cells horizontal at bottom, changing after a time to cells with angle at bottom, and further down changing the second time. [I suppose you mean by the cells "pointing downward," slanting downward from the outside of the cell to the base.—ED.]

FR. LEUENBERGER, *Schw. Bztg.*, 143, says in substance, "In America and elsewhere Italians are said to be least susceptible to foul brood. Just the contrary is shown by our statistics. South Switzerland, where Italians are native, is precisely where foul brood is most devastating." Which agrees with what I said. Blacks more vigorous than Italians in Switzerland, hence more immune; Italians more vigorous in America, hence more immune.

EDITOR HUTCHINSON says "that in introducing queens we can entirely disregard odor as a factor in the problem." The fact that in some cases we may introduce a queen directly is not satisfactory proof that odor cuts *no* figure. In general, time is an important factor in introducing, and what bearing has time except with regard to odor? Yet in those cases where a queen is introduced without any time being taken, one can hardly dispute that "we entirely disregard odor."

THE ONE THING especially to look for when trying to spot European foul brood is the yellowish larva curled up in the bottom of the cell. As Dr. Phillips has suggested, "black brood" is a misnomer, "yellow" being more appropriate. Considering this, considering the inconvenient length of the names "American foul brood" and "European foul brood," and considering the con-

fusion from calling both diseases "foul brood," why not call the European kind "yellow brood" and the other kind just "foul brood"? [See editorials.—ED.]

I WONDER how many still use wooden sticks to wedge sections in supers. The more I use super-springs the better I like them, and wouldn't go back to the stick-wedges if I had to pay three prices for the springs. I find that one spring to the super works well. It is so much easier to put in the springs, and so much easier to take them out; and they're on their job all the time, never letting go as the sticks sometimes do. There's another item, which alone would make me use springs. The sticks form a pocket in which a lot of bees get, and it is almost impossible to dislodge them when one is taking off supers. The springs form no such pocket.

THAT HIVE-TOOL that grows at Medina is a good tool. The bend at one end serves fairly well as a hook to lift out a dummy, although I don't like the straight edge at the other end so well as a curved edge for prying up supers or covers. [The great majority of bee-keepers would not like the rounding end of a tool as well as the way it is, and that is square. A rounding end is better for prying hives apart, but is not satisfactory for scraping—especially for scraping up in the corners; but you say the other, or hoe end, will do that better. Yes and no. It is our opinion that *both* ends should be suitable for scraping, on the principle that there are many men of many notions.—ED.]

"DURING the blossoming period there are so many blossoms that the bees do not go far from the hives, so we need hives all over the orchards," p. 438. I wonder! If a square mile of orchard has 100 colonies planted at the center, will not the fertilization be just as well done as if the 100 colonies were scattered all over the square mile? [From all the evidence in hand, and from some observation on this particular point, we believe we are correct when we say that the 100 colonies located in the center of a square mile of orchard would not do as good work in fertilization as if the colonies were scattered. We are convinced of this: That in the height of a *strong* flow bees do not go much more than a quarter of a mile. As the flow becomes lighter they go further; and when it ends up they may go two or three miles. Taking into consideration that there are likely to be only three or four good flying days in a fruit-blooming season, the inference is fairly drawn that those trees nearest to the bees will be pollinated better than those half a mile away. Moreover, bee-keepers can learn something from their fruit-growing neighbors. Some of them now say that a bee-yard half a mile from an orchard does not begin to do as good work as a few bees right in the orchard. Perhaps ten colonies would be sufficient in an ordinary farm orchard. In that case the maximum flight would not be more than an eighth of a mile.—ED.]

Siftings

By J. E. CRANE, Middlebury, Vt.

Two days of pleasant weather, and many colonies had begun work in sections, and in three days they were storing surplus honey.

What man does not envy the contented bee-keeper when he sees the picture of Dr. Miller on the May 1st cover of GLEANINGS as he watches the flight of his bees to and from the sweet-clover field?

I am glad Mr. Scholl is going to try a queen-rearing apiary, page 246, April 15. I believe it will more than pay. We can buy good queens; but I believe that, for business, we had better raise most of them if we can get the time.

Reference has been made in recent numbers of GLEANINGS that the census this year will not do our industry justice, as the crop was unusually small in 1909. True; but we can from it estimate somewhere near what a full crop would be.

Non-swarming devices still increase, as we see from page 295, May 1, and it seems evident that we are making progress. A device that would not fail more than one time in twenty would certainly be a very desirable acquisition.

Our friend Wesley Foster is quite right in thinking corrugated drip-boards are "far away ahead" of wooden drip-sticks; and I believe the time will come when bee-keepers will come to think cases of corrugated board "far away ahead" of wooden ones.

I thoroughly enjoy the discussion on automobiles by Henry Stuart, and the editor's footnotes on page 316, May 15. I believe the automobile has come to stay, and will play an important part in extensive bee-keeping in the future—indeed, it will be considered a necessity.

Page 281, May 1, Mr. Holtermann recommends feeding late a thick syrup for wintering. Not so long ago bee-keepers were advised to feed early so the feed could be stored and capped over while yet the flowers were in bloom. I believe Mr. H. is right. Late in November last I assisted a neighbor in feeding his bees and bought the yard this spring, and found the bees in fine condition.

You say, Mr. Editor, page 278, May 1, that there is no law against spraying fruit-trees except in New York, Ontario, and pos-

sibly Michigan. You forget that we have such a law here in the Green Mountain State. Some of the fruit-growers, when they found it out, were "awful mad," and thought the bee-keepers had stolen a march on them; but under the instruction of Prof. Waugh they learned it would benefit them as well as the bee-keepers.

That photo, page 322, May 15, certainly looks natural. The only criticism I should make is that Mr. Scholl should have placed in the picture some cans without any case covering them, for we receive them that way. Say, Mr. Scholl, why don't you borrow the hammer the editor of GLEANINGS uses to hammer into the heads of bee-keepers the fact that honey should be sold early, and drive home the necessity that honey should be packed more securely when sent by freight long distances? Your advice, p. 310, if followed by bee-keepers, would pay for many years' subscription for GLEANINGS.

We kept hundreds of colonies alive by feeding, and found that a good colony required from $\frac{1}{2}$ to $\frac{3}{4}$ lbs. of solid honey per day, or thick sugar syrup to keep them going. We found nothing so convenient or satisfactory to feed as well-ripened honey, granulated solid, that we had stored in ten-gallon can with open tops. The nice thing about it was that we could ladle out the amount a colony needed with a stout wooden ladle, and lay it on top of the frames without any special feeders; and it did not stir the bees up nor set them to robbing to any extent as a thin sugar syrup would do.

Few things have interested me more than the article by Samuel Simmins, page 285, in regard to spring dwindling and longevity and stamina. If Mr. Simmins has secured all he claims by breeding, it is certainly a most interesting and valuable fact, and I see no reason why it may not be as he states. We know that length of life is a family trait or characteristic among human beings, and one that is inherited by children from parents. Longevity, as Dr. Miller has shown, if only increased in bees a few days, is of exceeding value in securing a crop of honey. To this add stamina, the ability to work hard without exhaustion, and the productive power of a colony of bees is greatly increased. As it is with most of our bees, if we shake a colony on to dry combs during the honey-flow we find in two weeks well nigh half the bees gone; and before the brood begins to hatch, the force is greatly reduced, unless honey is very abundant. I have been in the habit, some years, of giving such colonies, after a week or ten days from the time of shaking, a comb or two of hatching brood, which greatly adds to their efficiency and filling of supers. Where honey is very abundant and easily gathered, bees live much longer during the working season.

Bee-keeping in the Southwest

By LOUIS SCHOLL, New Braunfels, Texas

ASCERTAINING THE SOURCE OF HONEY BY SCENT.

It is possible in many instances to tell from what the bees are gathering nectar without opening the hives or knowing upon what plants the bees are at work. Recently we arrived at one of our apiaries, 180 miles away, late at night. We did not know what the bees had been doing here since our previous visit five weeks before; but going through the yard we "scented" that a good honey-flow was on. The evaporation taking place in the hives gave off a strong scent which filled the air and was recognized at once as that from horsemint. Our cotton honey has a scent of its own, and one can easily detect it in the apiary during its yield. It is almost identical with the smell given off by the leaves if these are bruised by rubbing them to pieces. I know the scent of a good many sources of nectar, and can tell when the bees are working on certain plants. I have been told that a buckwheat honey-flow, one of basswood, and several others might be told in the same way; and from the little experience I have had with buckwheat and sweet-clover honey I am sure these could be easily detected.



BEE-STINGS FOR RHEUMATISM.

Since my article on this subject appeared in the *American Bee Journal*, p. 236, July, 1909, numerous comments and criticisms have appeared in not only that journal but in this one as well. I cited various instances where stings as a cure for rheumatism came under my own observations. One of the most severe criticisms appears in the October *American Bee Journal*, p. 365, together with another. The former one was written by Dr. A. F. Bonney, of Buck Grove, Iowa, who later also wrote an article on the same subject for *GLEANINGS*, p. 784, Dec. 1, 1909. There is no doubt that the writer of the article was well pleased about it, but I have been "laying low" and "collecting more evidence" in defending my side of the question as first cited in the *American Bee Journal*, which received such severe criticism at the hands of Dr. Bonney. For lack of space, however, none of this has yet appeared in that journal. Be this as it may, these proofs are sufficient to show that the doctor's criticism and his point of argument do not settle the case as absolute.

Right in this connection we find, p. 403 of the July 1st issue of this journal, an editorial which gives Dr. Bonney credit as having "stood almost alone in his contention that bee-stings will not cure rheumatism." Then follow two articles that show that

"there is something in it." I can present several very similar cases that will substantiate this very thing.



THE TEXAS HONEY CROP.

So far the honey crop has been quite fair in most localities; but as a whole it is not a bumper crop. While the quality in most localities was fine, in some the honey was darker than usual. Taking it all in all, the Texas crop so far has been good enough, especially since the prices obtained have been from one to two cents per pound above the average of any previous year, extending over quite a long period. In addition to this the demand has been strong, and the honey moved as fast as it was ready for shipment.

Despite these facts, there have been a number of parties again this year, as in all previous years, who sold their honey below the regular market price. A few do not make any difference between the price paid by the wholesale dealer and by the retailer or consumer when they ship direct to them. This is not right. It is an injustice to the dealer, who must sell at a higher price after he buys the producer's crop of honey, and it hurts the producers, especially those who are trying their best to maintain a good market price for their honey.



PAINTING THE HIVES, ETC.

Those of you who hire help for the busy season and then dismiss this help after the honey season is over can do a wise thing by keeping such help a month longer for the express purpose of "painting up" every thing about the place from hive to house. There is nothing that freshens up things more than a nice coat of paint. It revives and brightens up every thing to which the paint is applied. Besides bringing more "life" into the things painted, the whole surroundings appear to have a kind of renewed life in them, and this in turn has its effect on the bee-keeper and others around and about such surroundings. This is not the only advantage. Things that are well painted, and kept well painted, naturally last longer. No use trying to get around that. This is especially true where climatic, atmospheric, and other conditions have an unfavorable effect on the unpainted materials, whatever they may be.

In our hot climate here, every thing is affected by the heat. Wood checks and splits, warps and twists all out of shape unless kept well painted. This is a serious consideration when it comes to bee-hives, buildings, etc. In a wet locality wood decays; but paint keeps out the moisture. So it pays to "paint up" everything, once a year at least. Our reason for doing this after the honey season is that, first, we can keep the help a little longer for it; and, secondly, every thing then goes into the long wet winter season weather-proof.

Conversations with Doolittle

At Borodino

WHEN TO COMMENCE PREPARATIONS FOR WINTERING.

"Mr. Doolittle, I commenced two years ago with five colonies and now have seventeen. Mr. Jones was telling me the other day that you believed in early preparation for winter."

"Jones was right. I consider the months of August and September the months in which to prepare bees for winter. In my early bee-keeping I put this off as late as December. But after a little there came a winter in which the bees did not have a chance to fly for five and a half months, at the end of which I had very few colonies left. I then wrote to Mr. E. Gallup, a prominent bee-keeper at that time, telling him of my troubles, and he advised me to prepare the bees for wintering not later than September 20; and if I did not have a surplus in that month, to prepare in August. I have kept doing so ever since, doing the most of this preparation in August, except as there was a promise of stores being gathered the fore part of September, when the stores part was left till about September 15 to 20. I found that such early preparation paid well, for since then the bees have been kept confined for over six months, and yet have come out in good shape."

"That is an awful siege for them. How do you account for it?"

"By beginning thus early to put all in readiness as far as possible, the bees are given a chance to get their stores for winter placed just where they wish them, so that, by the middle of October, they are ready to go into that quiescent state so conducive to the best results."

"What do you do by way of preparation?"

"I begin on row one, at the first hive. This is opened, each comb removed, and the amount of bees, age of queen, square inches of brood, and pounds of honey, carefully noted."

"How can you tell the number of pounds of honey by opening the hive?"

"By weighing a few combs of varying degrees of fullness till the eye gets so trained that the weight of every comb can be judged with an accuracy which will not vary half a pound to the hive. The number of square inches of brood is gotten by measuring a few different-sized patches, when it is easy to estimate afterward."

"Do you think that as good as weighing the whole hive?"

"I consider it much better. While weighing is much better than guessing by lifting, there is a chance, where a colony has a poor queen or has become queenless, that the combs may be stored nearly full of pollen, when the probability for safe wintering is at a minimum all around. This condition

neither the scales nor the lifting process reveals at all. To be sure of all these little kinks, which, put together, have all to do with our success, the hive must be opened, and, when open, it is but a moment's work to make sure about the stores."

"But how do you tell the age of the queen?"

"By looking at the last year's record, if her wings are clipped; if not clipped, I know she is of the present year's rearing, as the wings of all my queens are generally clipped in fruit bloom."

"And how about the bees?"

"The amount of bees is told, and their age, by observing them on the combs. If two-thirds of the combs are well covered, and the light-colored and fuzzy very young bees are numerous, I know that they are all right."

"How do you keep track of all the different hives?"

"I carry some section material with me; and where I come to any hive where the old record is full I use a new one. After filling out it may read something like this: 'Aug. 23, 10; H. 29 lbs.; B. 500; Q. 09; B's O.K.' If the hive is chaff-packed, this piece of section is slid partly down in the chaff; or if in an unpacked hive, I put it in some convenient place where it will not become obliterated. In this way I have the record of that hive for years, as in some cases there are three and four pieces of sections slid down in the chaff."

"I suppose that any colony having such a record as you have just told me about, you consider in good shape for winter."

"Yes. But if it had as little as 25 lbs. of honey it would still be all right, or as little as 20 lbs. will do very well where the bees are to be wintered in the cellar."

"If any are found deficient in any way, what then?"

"This is noted on the section; and when the hive is closed a stone is placed on the center of the top, which tells me that it needs looking after; so when all are looked over, those having the stones on are looked after again, and whatever is lacking is supplied. That is, if the queen is poor she is killed, and a good young vigorous one supplied, so the colony may be prosperous the next spring. If brood or bees are lacking, and there is not time for a young queen to rear brood, frames of brood from a weak colony or nucleus are given. If honey is lacking, and there is still a prospect that more may be gathered, I wait till Sept. 20; and if at that time the lack is not made up, frames of honey, set away as a reserve during the honey-flow, are put in to supply what is needed."

More Testimony Against Japanese Buckwheat.

This (Sullivan) is a buckwheat county, and some twenty years ago nearly every farmer who raised buckwheat (myself included) tried the Japanese variety; but it proved a failure when compared with the other varieties, and I do not know of a farmer around here who has raised any of it during the past ten years.

Parksville, N. Y., July 11.

A. W. SMITH.

General Correspondence

REMOVABLE SCREEN BASKETS IN AN UNCAPPING-CAN.

Some Refinements of the Details in a Modern Extracting-room.

BY O. B. METCALFE.

On page 403, July 1, the editor describes the McIntyre uncapping-can now used by Mr. Townsend. We used that type of uncapping-can for two years. The one we used was 2½ feet wide by 8 feet long. It was much better than the small round cans; but this spring I got to work and made one that is still better. It consists of a rectangular tank 2 ft. deep, 2 ft. wide, and 3 ft. long. One man uncaps at each end, and the cappings fall into four screen baskets made of galvanized dog-screen with half-inch meshes. The baskets are held apart from each other and from the tank all around by $\frac{1}{2} \times \frac{1}{2}$ -inch strips, all running up and down, so there will be nothing to catch when the baskets are lifted out one at a time, by the turn-down bales on either side of them. Around the top of the baskets a half-inch wooden rim keeps the cappings from falling down between the baskets where they would hinder the drainage which takes place through all four sides of each basket and the bottom. The basket bottoms are made loose so that they can be used to shove out the cappings when the baskets are taken out and inverted. The four baskets occupy all the space in the uncapping-can except the half-inch drainage space, and they will hold all the cappings two men can cut off in a day. Thus they may have the night to drain and be lifted out in four well-drained cakes the next morning. In the very bottom of the tank a drain-pipe connects with a hose which carries the honey to the settling-tank on the ground beside the wagon.

Between the uncapping-can and the extractor stands a comb-box made of galvanized iron with a screen platform in the bottom of it, and a drain-hole also. This comb-box holds some 60 frames, and thereby allows the uncappers to separate the combs into groups of tender combs and strong ones, or light and heavy. This greatly helps the man at the extractor. By the way, the man at the extractor needs his combs classified when the uncappers get an easy run and get to passing him honey at any thing better than a thousand pounds per hour. He also needs a small hopper attached to the top of each basket, which I hope The A. I. Root Co. will soon get to putting on their frame baskets. Filling the passing baskets with the power partly on, a small hopper on each basket would be a great saving of time.

For the benefit of the man at the extract-

or the combs should all be set in the comb-box with the top-bars turned one way. He can more quickly get them in the extractor turned one way; and as he takes them from the passing baskets with his left hand and passes them back of him on to the platform with his right hand they will fall all one way so they can be picked up in bunches. To do this with the extractor moving pretty fast, the operator should never take his eyes from the baskets, and should land the combs by feel. He will soon get to land the tenderest comb without injury. When he has re-filled the extractor, and by the crank has helped the reel to get underway, he can turn, and, taking four combs the first grab and three the next, almost fill a super in a second. The extra comb from the eight-frame extractor where seven extracting-combs are used in an eight-frame hive-body may be left to accumulate to seven. Using this system I have extracted 1200 lbs. an hour. If any one has better systematized the man's work at the extractor I should be very glad to hear from him.

MORE ABOUT THAT DR. MILLER PLAN OF PREVENTING SWARMING BY VENTILATION.

On page 404, July 1, Dr. Miller accuses the New Mexico Chap of having a faulty "noticer" and a "noter" that needs repairing. I do not think so, and I should be glad if others would help me out on this subject. I feel complimented that Dr. Miller took time and space to criticise me at all; but at the same time I do not feel flattered enough to abandon the point.

Now, his idea seems to be that the bees get too hot and proceed to swarm if they are not given ventilation enough. Can he answer the following question with a "got too hot" explanation? Why do our bees swarm most in the spring when the weather is cool and the honey-flow the same as it often is during a dearth in the summer? During the hot summer days we have not had a swarm in 60 days from over 1600 working colonies standing out in the boiling hot sun, where it is so hot that now and then the combs in one of the hives will melt down. We have the queen confined with a queen-excluder to half the space she had in the spring when we could not keep them from swarming whenever they got a hive nearly full of brood and honey. They will swarm now if they get filled up, but they will stand much more crowding than they would in the spring. We have not changed the entrances. Is this not pretty good proof that even excessive heat does not cause swarming, and that I am right in my idea that it is a question of scant room at a time of *rapid* brood-rearing? The question I raised is, "How does ventilation prevent swarming?" If the doctor tries to change from hot air to bad air I have him "cornered," for, no matter how foul the air becomes in a hive, the bees will never swarm out unless they are so strong in bees and brood that their instinct says they can risk a division.

Dr. Miller says that his bees fill their

combs clear down to the bottom-bars just as well with those two-inch entrances as they ever did with the $\frac{3}{8}$ entrances. Perhaps they do; but do queens lay as many eggs in all? It seems to me they would be inclined to lay down there, since the bees cluster down there. The question is, "Can the bees take care of as much brood, especially here, where the range of temperature is so great between day and night?" If they can not, they will see to it that the queen does not lay so much; and if she does not lay as well with a large entrance the result will be fewer bees. This seemed to be the case where I gave colonies excessive ventilation. The strongest colony in our home yard to-day is working in three extracting-supersthrough a $\frac{3}{8} \times 3$ -inch entrance without any ventilation above.

I believe that bees can keep their hives right for brood-rearing and wax-working better with a small entrance than with an entrance as large as $\frac{3}{8}$. I am watching very closely, and I have never seen any evidence that any colony of bees needs more than a $\frac{3}{8}$ entrance clear across the front of the hive at any time. I thought at one time that a big entrance stopped loafing; but later I noticed that at least a great many of the loafers loafed just inside. Somebody help me. I can't battle alone with Dr. Miller. I am awfully afraid he will get the best of me, and I am hollering for help.

Mesilla Park, N. M.

IS THERE A NEW BEE DISEASE?

A Puzzling Set of Symptoms Resembling Both Paralysis and Dysentery.

BY E. F. ROBINSON.

On page 377, June 15, I notice Catharine Beattie, describing the peculiar condition of her bees, asks if it is bee paralysis. I have seen four cases of bee disease just like this, and am sure it is either a constitutional weakness or an intestinal disease inherited from the queen, and have proved most conclusively that it can and must be cured by requeening. The sulphur treatment is entirely wrong, without even a theory to support it. As the bees do not eat it, its action must be by the fumes formed by the heat of the bees in the hive. Sulphurous fumes act principally on fungoid growth on minute animal life, neither of which is supposed to be present in bee paralysis, as paralysis is understood to be an affection of the nervous system.

Two of the cases under my notice were with bee-keeping friends in Victoria. Not knowing any better remedy I advised trying the sulphur treatment, but both colonies dwindled away and died right out during the winter. My third case was among my own bees in Victoria. The queen was purchased in the summer of either 1895 or '96—rather late in the season, I think. The colony wintered well; but in the spring the

trouble developed just as described by Miss Beattie. The bees would crawl out of the hive, and be dragged out by the healthy bees in a listless, sluggish manner, bodies all swollen up as in dysentery, the wings half extended. The bees would lie on the ground close about the hive. If I attempted to pick one up it would make a feeble movement with its wings, but show no desire to move its body. On opening the hive I found the rabbits under the ends of top-bars full of these swollen, lethargic bees, without strength or desire to move. I found on pressing the bodies that a nasty, foul-smelling, yellow mass would be expelled, but not by the natural outlet, always by a rupture on the bee's right side.

The question is, "Why should this peculiar condition prevail?" Does it not show that the intestines were blocked by constipation? Again, we may ask if the bees were not eating pollen (but there was no reason to, as there was plenty of honey in the hive, and dandelion and fruit bloom in plenty). What produces this *viscid* mass of yellow substance? Surely not honey—perhaps some disease of the intestines. It could not be what they had gathered, as other colonies were quite healthy. I sent some of these diseased bees to The A. I. Root Co. for explanation, as they were from a queen of their raising, and not twelve months old. The suggestion of poison from tree-spraying was offered; but that theory did not hold, as other bees were not affected, and it continued to get worse with the mature bees, but the brood was quite healthy and lasted long—after fruit had all set, well into July.

I tried the sulphur, and fed a syrup with formic acid added, but all to no use. As the queen was very prolific, and the bees handsomely marked, I hesitated to break up the colony. But I smothered the lot, burnt combs of brood, and painted the inside of the hive and bottom-board with strong carbolic acid. Twenty-eight miles from Victoria I have my outyard. There is little or no fruit grown there, and I am positive no spraying is practiced, as I have failed to see any fruit-tree pests around.

In the spring of 1909 an Italian colony showed the trouble just as described above—the only one out of thirty colonies. I tried the pressing of the bees' abdomens as before, with the same results—bursting from the right side. I had colonies each side of the affected one, six feet apart, but all remained healthy. As I was receiving some imported queens in June I killed the queens in the affected colony and introduced one of my new stock, left the bees, brood, and honey in the affected colony just as it was (and it was very bad) to see what would become of it. It gradually recovered. I never fed or bothered with the colony at all—just let it shift for itself as an experiment. As it had stored very little honey I fed it up for winter in September. It wintered well; and to-day, June 24, it had eight frames full of beautiful brood, besides six frames in a shallow extracting-super, equal to a total

of 12½ Langstroth frames, all healthy, and in splendid condition.

I would advise Miss Beattie to requeen her affected colonies, and earnestly ask that her letter and your humble servant's reply be sent to Dr. E. F. Phillips, as my observations may suggest the line of investigation. Requeening is the cure, but it is well to know the cause of the trouble.

Have you any record of alfalfa failing to set seed because of the scarcity of bees to bring about the needed fructification? I have a case reported from a hot irrigated district.

Victoria, B. C.

[Dr. Phillips' opinion on this question would be appreciated by our readers. Can a queen bring trouble of this kind?

In reply to your last paragraph, we do not recall any such record or report.—ED.]

SHAKING BEES.

The Experience of One who has Actually "Shook 'em."

BY WALTER S. POUDER.

I have just read the article by Geo. W. Williams, page 449, July 15, in which he wishes to hear from those who have had experience rather than further theories. I am shaking as if I had palsy to reply to that article. Some fifteen years ago shaking bees was one of my hobbies, and I wrote it up at that time for the *Indiana Farmer* under the caption of "Swarming Without Increase." I did a lot of experimenting to learn the limitations, and I watched many others take it up, some with success and many with failures. If Mr. Williams will keep on shaking his bees during a poor honey season, or at any time when honey is scarce, he will soon shake his bees all away. On the other hand, shaking, swarming, and producing comb honey fits in most beautifully if a certain course is pursued. Who has not been seriously annoyed by having a swarm issue when a super was just about half or more filled? We hive the new swarm; but by the time the two hives have gained strength to work again in supers, the flow is a thing of the past. In such cases I learned to shake the bees from the parent colony with the new swarm, but I found certain conditions that meant failure or success, according to several very important details. The new swarm must be hived with starters only in brood-frames, using a queen-excluding honey-board and placing the comb-honey super on the hive. Every bee should then be brushed or shaken with the new swarm. This hive will now produce more surplus comb honey than any other hive supposed to be a normal hive in the same yard. Some will ask why. Well, the bees go right in the super, storing and building comb. They will build nice worker comb in the brood-frames, and fast enough

to accommodate the queen. There is no brood to be taken care of, and the entire force concentrate their energies on storing honey in super.

Mr. Williams infers that he gets as satisfactory results by placing one frame of brood in brood-chamber, or returning all the brood. With me, this or either would be ruinous and a total failure. If a comb is placed in the brood-chamber the bees will exert their energies there instead of in the super, and the honey-cells on the comb will be drawn to an abnormal length, ruining the adjoining combs. To return all the brood would be worse than folly, with me. Full sheets wired in the brood-chamber are not desirable, because they provide too much storage, and our object is to get honey stored in the super. Those who have reported failures to me have invariably committed one of the errors about conditions in the brood-chamber. Inch starters in brood-frames is the correct method, and any deviation will bring unfavorable results.

Now some one will ask about the combs of brood which we have to take care of. They can be distributed to weaker colonies; but if you are a good bee-keeper you are not likely to have weak colonies during the swarming season, because you are supposed to have equalized the strength before the season opened. If one has an extractor, perhaps the most profitable method would be to place the brood in a third story on a hive with a queen-excluder on the lower brood-chamber. As fast as brood hatches, the cells will be used for honey; and in a few days all larvae are sealed over, so that in extracting there is no throwing-out of larvae.

In this we have natural swarming without increase; but if one desired increase the plans could be deviated accordingly. For instance, queen-cells could be saved, and enough bees left on the brood to protect it.

Indianapolis, Ind.

SUB-EARTH VENTILATION FOR BEE-CELLARS.

The Pipe Line Should be Water-tight.

BY S. T. PETTIT.

In the 80's, or about a quarter of a century ago, a good deal was said about sub-earth ventilators. The thing looked so reasonable, that, without due consideration, I spent some money on it, and put down one that I thought was right up to date, and so it was. But it proved to be only an edifying failure. It was simply a six-inch tile-drain, varying in depth from three to six feet. It entered the cellar about two feet above the bottom. From the cellar it extended northwest. This was in its favor, for the coldest winds are generally from that direction, which increased the flow of air through it into the cellar when most needed.

It proved a decided help in maintaining an even temperature in the cellar; but it filled the cellar with air saturated with

moisture. Drops of water were trickling down the stone walls, even the timbers above were wet, and drops of water were hanging from them. In a short time the ends of the timbers against the walls rotted so one could pick them to pieces with the fingers. The bees were damp, and many of the combs moldy.

Another objection to tile is that, in windy weather, earth air will find its way through the tile into the cellar instead of pure air through the tube. Of course, in time I closed up the entrance to the cellar, and gave ventilation through dark passages placed in the windows.

I have not tried it, but am confident that an iron pipe, not less than 6 inches in diameter, will prove a useful ventilator. It must be water-tight; then, as moisture will not go through iron, the air in going through the tube will be warmed and delivered into the cellar dry and in condition to take up moisture and give out heat. Then as the air flows in at one place and out at another the cellar is kept sweet, dry, and at a fairly even temperature. Glazed tile has been suggested instead of iron; but it is a poor conductor of heat.

Lay of the land permitting, the ventilator should extend from the cellar in a westerly to northwesterly direction. It should be well below the frost-line, and, I think, about 100 feet long. Air being influenced by temperature and winds is very fickle; so I believe that, for best results, the pipe should be about level from end to end. If necessary, an elbow can be used to bring the end of pipe above ground. The sub-earth ventilator does not occupy the place in bee-cellars that its evident usefulness claims for it.

Besides drying and warming in cold winter weather, it can be used to cool, comfort, and quiet the bees in warm spells in winter. For this purpose a cowl can be used at the outer end of the pipe to force air through it into the cellar. Another thing, its passage through the tube will raise its temperature, which may have pollen too near the freezing-point, and so make the ventilator more useful when the next cold snap comes along.

It occurs to me that, during warm spells in winter, there may be condensation in the sub-earth ventilator. To get rid of the water, one end of the tube must be lower than the other. If, owing to the lay of the land, it is necessary to have an elbow at the outer end, then the end entering the cellar must be lower than the other. A vessel of some kind can be placed to catch what may come in. No water should stand in the ventilator.

Aylmer (W.), Ont., Can., June 30.

[Our experience with wintering hives in the bee-cellar under the machine-shop convinces us that, when the bees get restless, pure air will quiet them when nothing else will. When the outside air is warm it is an easy matter to ventilate with windows; but

very often, the foulest air exists when it is very cold outside, and here is where the sub-earth ventilator would be a help. Is it not possible that most of the failures of sub-earth ventilators were due to the influx of wet air?—ED.]

COMB HONEY PRODUCED WITHOUT SEPARATORS.

BY NELSON M. GOOD.

I have tried to profit by every man's experience; and after giving separators a fair and impartial trial I have completely discarded them, using only one on each side of the super. I set my hives level, and weight them with stones so that a strong wind will not shake them, and use a starter in the sections that reaches about two-thirds of the way down. This starter hangs *straight* in the center. I am careful to fasten the starter so it will not fall down nor hang crooked. This is the secret and assurance of a nice super of honey with straight even comb. Of course, there are exceptions to nearly all rules; but I have a larger per cent of straight marketable honey in this way than I can possibly get by using separators of any kind; and my honey is good standard weight—a little more than is required, and yet this extra weight, I consider, does not cost me any thing, for my bees work faster, I believe, without the separators.

My neighbor has nearly 300 stands of bees, and he looked my honey over at the end of the season and said that I had more perfect comb honey on an average, without the separators, than he had with them. Yet it was no new thing with me. I have proved it over and over until I am well satisfied as to results. I will add that I took first and second prizes year before last at four different fairs, viz., Grand Junction, Glenwood Springs, Aspen, and Grand Valley, Colorado.

Many times bees fasten their comb to separators, and thus make a break in the comb, when, if the separator was not there, the comb would be straight and sealed.

Grand Valley, Colo., July 20.

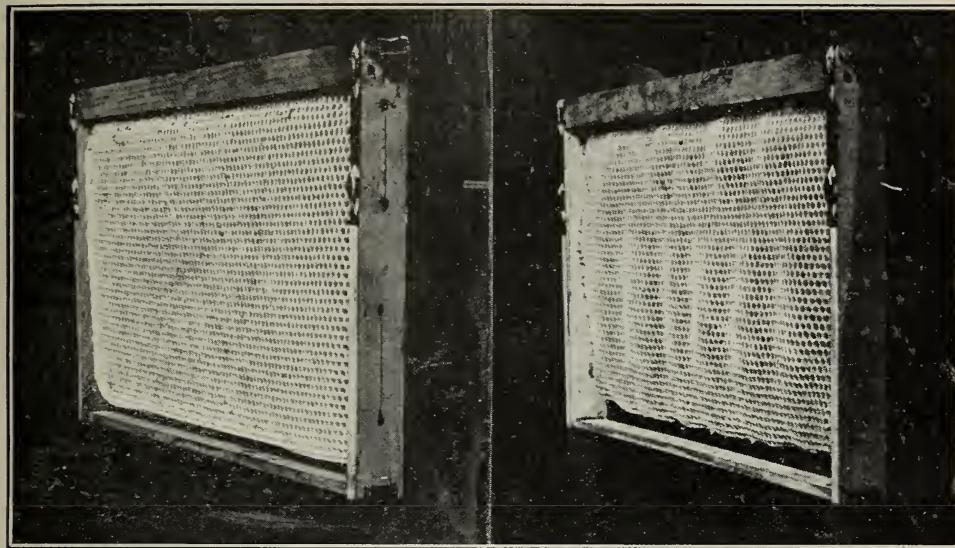
[Some bee-keepers are able to produce fine comb honey without separators; but in most cases, either owing to hives not being properly leveled, or to some other cause, the sections are found to be filled very unevenly. That bees work better when no separators are used, can not be doubted.—ED.]

Foundation 22 Years Old Accepted by the Bees.

My experience fully agrees with that of Dr. Miller as regards the comparative merits of old and new foundation. I am now using some foundation in sections that is over 20 years old, and bees do not seem to discriminate against it in the least. It is still in original packages, as it came from the manufacturer 22 years ago this summer. Part of it I used in Ohio, before coming south, and I am now using the remainder of it without any signs of detriment.

SAMUEL RAU.

Hendersonville, N. C., May 16, 1910.



HORIZONTAL AND VERTICAL WIRING COMPARED.

Note that the comb at the left, built from horizontally wired foundation, is perfect except for the slight sagging. The comb at the right, built from foundation reinforced with seven vertical wires and two horizontal wires, is very irregular.

AN OBJECT-LESSON IN VERTICAL AND HORIZONTAL WIRING.

Some Surprises.

BY E. R. ROOT.

A short time ago, it will be remembered, we referred to the fact that horizontal wiring did not prevent the sag in foundation; that it had been found that the five or six rows of cells next to the top-bar would generally contain honey rather than brood, for the simple reason that cells were stretched too much for the queen to occupy. It is not practicable to wire on the vertical plan with thick top-bars. Various schemes showing up and down wires have been given in these columns, but none of them are really satisfactory. More than once the desirability of having vertical wires incorporated into foundation during the process of making has been expressed. So much was said that some two or three months ago we perfected a machine by which this could be done. We sent out a few test lots of foundation with vertical wires already incorporated in the wax. We also put quite a quantity of this product in our own home yard. This foundation with the wires already in was secured to the top-bar by the wedge-groove plan. One or more horizontal wires in addition served to hold the sheet along the center line of the frame. When the bees began to draw it out there was every promise that the plan was going to be a success. But further developments proved otherwise. For some unaccountable reason the comb from vertically wired foundation was wavy

as the subjoined illustration will show. In the engraving on the left will be seen an ordinary horizontally wired frame of foundation. On the right will be seen a fair sample of a vertically stayed comb with its hills and valleys. The vertical depressions are directly over the wire. Squint along the row of cells and you will see that the foundation in the horizontally wired frame has sagged a little. Nothing of this kind appears in the other. But there is an objectionable waviness, as before mentioned. This was, indeed, a great surprise. If this waviness were confined to only one of these vertically wired frames, or even to two or three of them, we should not think very much about it; but nearly every one of these combs having vertical supports shows this very objectionable defect.

Years ago, when we used vertical wiring exclusively, we saw no such trouble; but it should be remembered that we were then using a much heavier grade of foundation. The light brood foundation of 20 or 25 years ago had a very thick base, or midrib, as compared with the same grade of to-day. While it is true that we could remedy these vertical waves by using a heavier grade of foundation, we would lose one very important object that we sought to secure by the use of the vertical wires—namely, economy of wax. It would be far more practicable to use a heavier grade of foundation for horizontal wiring than with vertical.

Since our preliminary experiments with vertical wiring we have been working out another plan of horizontal wiring which we believe is going to solve the difficulty to a great extent if not entirely. The scheme is

simply this: String the wires closer together near the top-bar about an inch apart. The other wires, if they are needed, can be placed increasingly further apart as we approach the bottom-bar. The sag, or the major portion of it, with the old kind of horizontal wiring, occurred near the top-bar. It is this part of the foundation that should be reinforced more than it has been in the past. The bottom wire, if used at all, is only necessary to hold the foundation centrally in the frames; and then, besides, it serves the further purpose that, when the comb is turned over for examination, it will not fall out.

But quite another surprise awaited us. We found that, during the drawing of the foundation into comb, there will not be much sag; but the sag is quite apt to take place a year or two afterward. During hot weather, especially if it is very warm and the combs are filled heavy with honey, they will have a tendency to sag. This elongation of the cells takes place so gradually that the ordinary apiarist does not observe it; but if he will take a horizontally wired frame containing light brood foundation, and put it in a hive, he will find that the foundation will be drawn out with almost no appreciable sag. He is apt to draw the conclusion that horizontal wiring is good enough for him. But let him look at that comb two years afterward and he will probably find a very appreciable sag.

When we found that all vertically wired foundation was wavy we wrote to Dr. Miller and asked him if he found any waviness with his "splinted" foundation. He replied that he saw none; but if we remember correctly we saw some splinted combs that were wavy. Perhaps there was an illustration of it in these columns. We should be glad to get reports from those who have been "splinting" their foundation.

Later.—At the beginning of this article we stated that we were unable to account for the waviness in the vertically wired comb. A careful examination of the engraving on the right will show an interesting fact. Just notice that in addition to the vertical wires there are two horizontal wires, one about a third of the way down, and the other about $1\frac{1}{2}$ inches from the bottom-bar. Right along the line of those two wires you will see that there is no waviness; that is to say, the comb is as straight as a board directly over each wire. The same is true over the vertical wires. Now, the spaces between the vertical and horizontal wires are bulged. This suggests the fact that foundation in the process of drawing out expands *both vertically and laterally*. In the horizontally wired frame shown in the illustration on the left, where there are no vertical wires, there is an opportunity for downward expansion; and the four wires are, apparently, sufficient to prevent lateral expansion, and hence we have a perfectly looking flat comb except that we note a slight sagging. In this connection it is proper to observe that this horizontally wired comb was taken from the hive just as it

was drawn out, or, rather, shortly after. Experience shows that this comb will show more sag two years hence than now.

The conclusion of the whole matter is that, if foundation is wired both vertically and horizontally, we shall have a perfect comb without sag and without waviness. But this introduces the factor of extra expense; and it would, therefore, be cheaper to use horizontal wires and a heavier grade of foundation than to use the light brood with vertical and horizontal wiring. But from present indications it would appear that placing the wires near the top-bar and closer to each other, will still permit the use of light brood foundation.

We shall have some illustrations later on that will tell the story; and it will be a true story, for the photo does not lie.

◆◆◆◆◆ BEES CARRYING EGGS TO REAR BROOD.

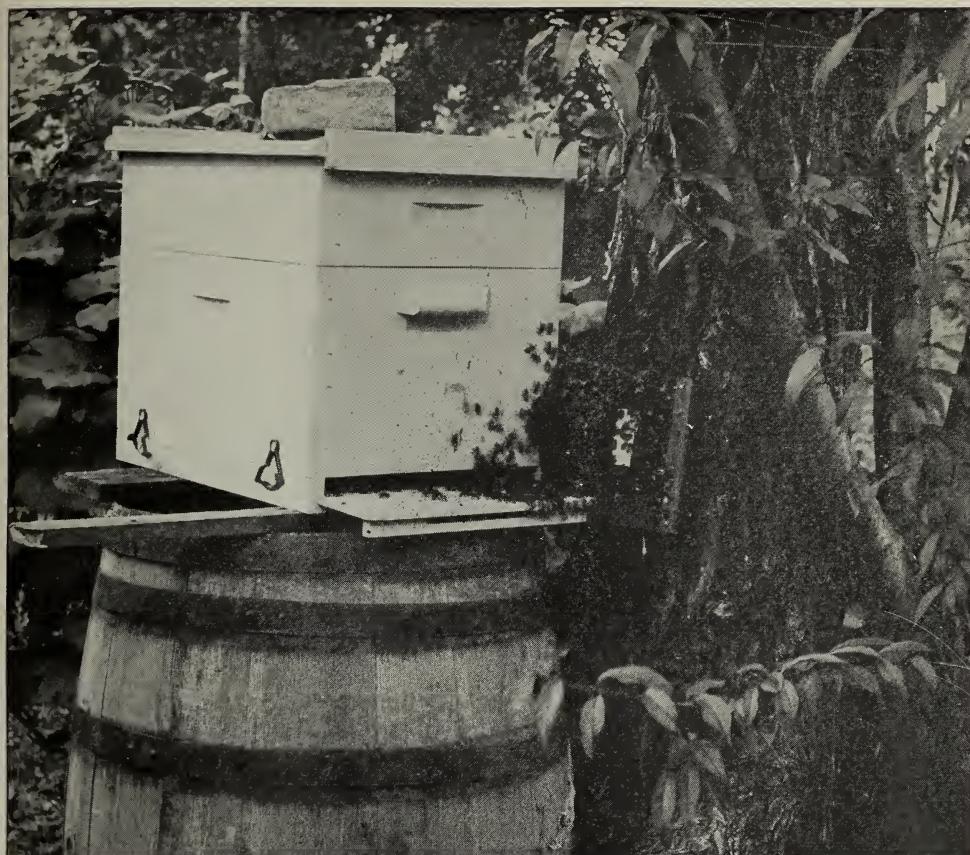
Is This Unusual?

BY W. T. BRAND.

During our recent drouth in the honey-flow I found it necessary to feed some of my bees. As I did not want to buy sugar and put it into the brood I decided to cage my queens until the flow started again. I caged them about July 5. July 15 I went through them to cut out the "forced" cells which I expected to find. I was very much surprised to find eggs and young brood as well as queen-cells. At first I was puzzled to know what was taking place. If there was another queen, why were those queen-cells there? I looked for another queen, but in vain. I shook them through a queen-excluder, but still no second queen. The old queen was still in the cage. I gave it up as a bad job, and left it and resumed my work. Before long I came to another case of the kind. This time I determined to solve the mystery. I soon found out what was wrong or happening. The queen was laying eggs on the wire netting of the cage and in the bottom of the cage, and the bees were reaching through the wire and getting the eggs, placing them in the cells, and taking care of them. I found about 15 out of 175 at the same trick. Is this unusual? I have had ten years' active experience among the bees, and this is the first time I have found any thing of the same nature.

LaSalle, Col.

[While we knew that bees would carry eggs from one part of the brood-nest to the other, we do not remember to have seen any reported instances like this where bees actually took eggs from the wire cloth of a caged queen and deposited them in cells and raised brood. Our correspondent seems to know what he is talking about, and we do not believe he is mistaken when he says that the bees actually moved the eggs. This is really an interesting fact in bee-lore, and if any one else has had any experience like it we should be glad to hear from him.—ED.]



THE A B C AND X Y Z PLAN OF TRANSFERRING FROM A BEE-TREE; THE BEES TRANSFER THEMSELVES.

TRANSFERRING FROM A BEE-TREE WITHOUT MUTILATING THE TREE.

BY GEO. W. BEARD.

In the fall of 1908 I cut a bee-tree—that is, I cut out the top containing the bees and lowered it to the ground with a rope. I then brought the log home and stood it up in the fork of a peach-tree.

In the spring of 1909 the colony proved to be in good shape; and, although I liked the novelty of having it in the log, I knew that, if they were in a good hive, they might reimburse me for skinning my shins in climbing that tree. But how was I to get them out of that log?

About this time I received a golden queen which I had ordered, and in introducing I put the old queen on two frames of brood and one of honey to hold in reserve in case the new queen was killed. The new queen was accepted, and as I am only an amateur I didn't like to kill the old queen. To be sure, I could put the brood back in the hive; but the queen?

A few days later, while reading in my

A B C and X Y Z (and, by the way, if an amateur hasn't that book he should get it at once) I found on page 48 these words: "How to get bees out of bee-trees," etc. Right there I found what to do with my old queen which was now doing well in the three-frame nucleus. I placed a barrel beside the log, and on the barrel I put a hive containing five frames of full-sheet foundation. The hole in the log was about three inches in diameter, so I sawed out a board six inches square and made a one-inch hole in the center and fastened a Porter bee-escape over the hole. Next I made a 3½-inch cloth ring by twisting a cloth and tying the ends together.

Placing the escape-board, cloth ring, nails, and hammer so they would be handy, I put the three-frame nucleus with the old queen in the hive on the barrel. Then, using the cloth ring as a washer, I nailed the escape-board over the hole in the log, being careful to place the escape so the bees could come out but could not get back in. This was done when the most bees were flying; and before I could get away the board and corner of the hive were covered

with bees that were coming in from the field, while those in the log were coming pell-mell through the escape, having been stirred up by driving the nails.

In two hours I had a good strong colony in the hive, and more coming out of the log. Now, to make a long story short, I left them just as they were for five weeks, at the end of which time I removed the escape from the board, leaving the board over the hole. I then sulphured the queen and remaining bees that were still in the log by blowing the sulphur fumes through the one-inch hole in the board. After giving them a good dose of sulphur I closed up the hole with a cork. In about 12 hours I removed the cork and waited one week more. The bees from the hive piled into that log, and brought out the honey, putting it in the hive.

Pittsfield, Ill.

BEE-KEEPING IN CALIFORNIA.

A Laurel Canyon Bee-keeper Who Sells His Whole Crop from a Small Store Close to the Apiary.

BY MRS. H. G. ACKLIN.

A trip to beautiful Hollywood, from this city, is interesting at any time; but at this season of the year it is perfectly delightful, especially after a refreshing rain, which we were fortunate enough to receive the day previous to this visit. Green fields are everywhere between the two cities—or, I should say, between Los Angeles and its attractive suburb, as “they two” are now one, Hollywood having been annexed to the larger city at a recent election.

Quite extensive fields of peas in bloom can be seen from the trolley car; but I do not know whether the blossom is honey-producing. Carnations and many other varieties of flowers are grown in many places

along the way. There are a few orange and lemon orchards, also olive-groves.

At the end of the car line, where the road starts up the canyon at a gentle slope, is an orange and lemon grove. Under the orange-trees the ground was as white as if snow had fallen; but on looking at the trees one missed no bloom, as they were literally one mass of white with green leaves peeping out between; and the fragrance of those blossoms is beyond compare. In trying to describe the delicious odor of an orange-grove in bloom, a friend said last spring, “It is like stepping out into Paradise.”

After an invigorating walk of about three-quarters of a mile along this canyon road, which, by the way, is a very good one, as automobiles are passing and repassing almost constantly, the apiary of Mr. David K. Smith comes into view. He has terraced the side hill just opposite the road and across a little ravine, and on those level steps he has placed his 175 colonies of bees.

Mr. Smith has a small honey-store on a level with and just beside the road, so an auto or any vehicle can be driven alongside, and the occupants procure honey without alighting. In fact, he disposes of his entire crop at very good prices, right from that little store; and last season he bought 38 ten-gallon cases more to supply his trade. If every bee-keeper could plan some way of disposing of his honey crop as successfully as has Mr. Smith, the honey commission men might go out of business.

Just over the little range of mountains from where this apiary is located is San Fernando Valley, a fertile farming country twenty-five by thirty miles in extent, or thereabout. About two miles to the west, and up grade all the way, is Lookout Mountain, from whose little flat top can be seen the whole country roundabout, including the grand old Pacific, towns intervening, and beach towns—Santa Catalina Island, and islands still further out. A party, including the writer, reached this little eminence one evening last fall just after the sun had disappeared, and the beauty of it all was beyond description.

The honey flora on these small mountains is limited. The bees were gathering pollen from the live oak, and possibly some from sycamore-trees. The manzanita does not flourish there. I obtained specimens of two kinds of sage and the horehound plant. The catnip plant has been tried, and yielded well for a time, but could not survive the long dry summers. The sages, white and



PARTIAL VIEW OF DAVID K. SMITH'S APIARY, NEAR LOS ANGELES, CALIFORNIA.



ANOTHER VIEW OF THE SMITH APIARY, SHOWING THE HONEY-HOUSE AND LARGE CORRUGATED TANK.

black, are making a luxuriant growth, the latter having commenced to blossom. The first surplus honey obtained in this canyon is from the black sage.

Laurel Canyon is situated so near the ocean that probably it never gets extremely dry, and a fair honey crop is doubtless obtained every year. Mr. Smith estimated his crop last year as averaging 60 lbs. per colony for both comb and extracted, which is not nearly as large as reported from some other sections of the State; but he has the added advantage of receiving larger returns for his product than if he were obliged to sell at wholesale; and, besides, he has no hauling or shipping.

Some of the rest of us here in California might get wise and locate apiaries in canyons near fashionable mountain trails and roads, and thereby receive double for the honey crop that is obtained under existing conditions; while at the same time we would be educating the public to eat honey. The honey from this canyon apiary is extracted and bottled in a small building near the little store, which building, I think, is the home of the apiarist most of the year.

There is a danger sign in plain view from the honey-store, warning any intruder who might otherwise care to brave the bees. I was nearly across the narrow ravine, bees and sign notwithstanding, when Mr. Smith met me, doubtless wondering what I meant. I soon explained that I was accustomed to bees, and could not resist having a talk with a bee-keeper, so he gave me a rustic chair under a live oak, and we "swapped lies" for about half an hour.

Speaking of lies, it does not seem possible that there could be any liars among California bee-keepers, especially in such locations



A HONEY-STORE WHERE THE TOTAL OUTPUT OF A LARGE APIARY IS DISPOSED OF.

The apiary, being close by, the cost of transportation may be neglected.



ONE OF THE OUT-APRIARIES BELONGING TO I. T. SHUMARD, NEAR OSPREY, FLORIDA.

as the one I have been trying to describe. The natural scenery is so perfectly magnificent that all avarice and sin of every description should give place to lofty thoughts and high ideals.

Los Angeles, Cal.

hive, and Mr. McCauley near by with smoker to use in case of need. Quite a little of the saw palmetto shows also in the view, and this is their main supply crop. Bro. Shumard and family now have the mainland shore well stocked with bees for a distance of twelve to fifteen miles.

Philo, Ill., July 12.

ANOTHER GLIMPSE OF ISLAND BEE-KEEPING IN FLORIDA.

BY M. L. BREWER.

On page 435, July 15, 1909, I gave the readers of *GLEANINGS* some glimpses of Mr. I. T. Shumard's "Island Home" and some of his bee interests. Herewith is a view of one of the out-apriaries established that I then told of. This one, I believe, is down on South Creek, and belongs to Orville. Early in March of this year while visiting at Island Home we all boarded the launch and took a cruise to this apiary and found the bees booming; and while there several hives had to have top stories given them. At last reports I had, they were reaping a good harvest.

The location is on the creek bank near the water, for convenience for landing supplies and taking away the surplus, as all their other apriaries are so located. The view shows Mr. Shumard bending over a

SEPARATING HONEY FROM CAPPINGS.

THE ADVANTAGE OF SPREADING CAPPINGS OUT IN A LARGE THIN LAYER.

BY E. M. GIBSON.

The July issue of the *Bee-keepers' Review* for 1909 has an article by Elmer Hutchinson in which he says that his loss of honey in cappings is \$50 for 20,000 lbs. of honey extracted. Whew! Thinking some of the readers of *GLEANINGS* may be doing likewise I will try to describe my method of disposing of the cappings. The illustration shows my uncapping-table. There are tin gutters, J, J, on the under side, which are cut in such shape as to convey the honey toward the center. Two boards, B, B, a foot wide and six feet long, are nailed into the frame shown, sloping from the outside toward the gutter, leaving a space of four

inches between the two, through which the honey falls and is conveyed by the gutters into a receptacle underneath. Two frames, C, H (one would be too unwieldy to handle to clean, etc.), covered with coarse screen wire not more than 7 to 8 wires to the inch, are made to fit into the frame and rest on crosspieces which are chamfered on the upper side to a thin edge to prevent the honey from accumulating, and nailed to the boards. When in place the frame and screen should be even on top. An upright piece is fastened to each end of the table, to which a 1×2 is fastened running the whole length of the table at a convenient height for scraping the cappings off the knives.

Two can uncap at the same time if necessary; but if only one is doing the uncapping the ends of the table can be used alternately; or if one cares to be near the extractor the cappings can be thrown over to the end not in use, and left to drain. During the dinner hour and at night the cappings are spread out over the table, and in the morning they are put into the solar extractor, and the honey drawn off every night. The drawing of the honey every night is important; for the longer it is left the darker it will get.

I have never exceeded two cases (240 lbs.) of solar honey from the cappings of much more than 20,000 lbs.; and as I sell all of my honey at one time I have never had to take less for the solar than for the best except once, and that was because I left it in the

solar extractor too long. The table takes up more room than a can or barrel; but at the rate of the above-mentioned loss, one year would pay for quite an addition if one had not room enough.

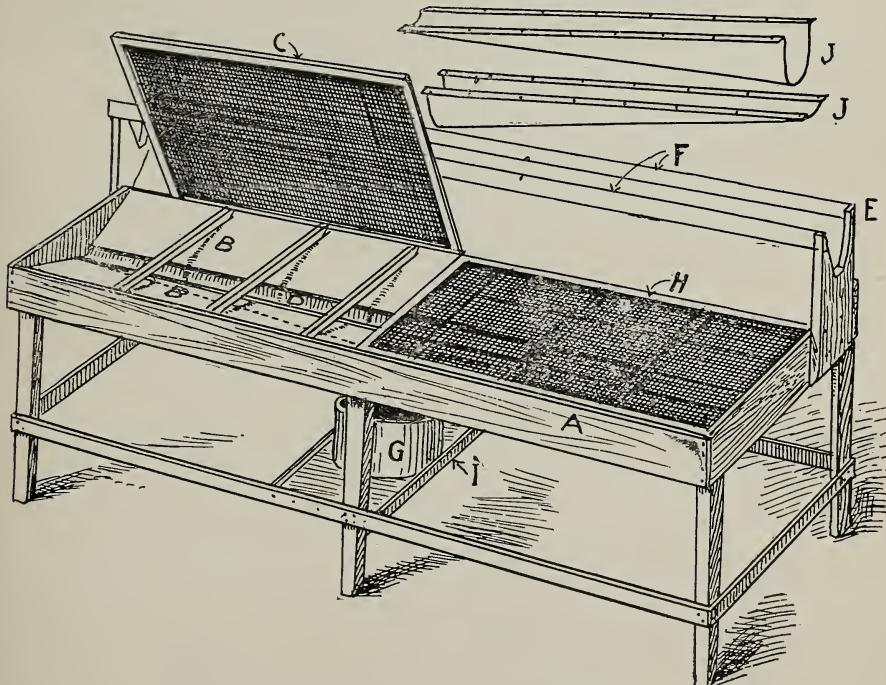
The material to build a table like the kind described costs but a trifle, and any one who can use a saw and hammer can build one. Some object to capping-melters on account of the heat, and I think the table just the thing to use in connection with them. One could do the uncapping at the table, and, after draining over night, the cappings could be run through the melter; and, there being so little left in them, the loss would be minimized.

WHAT REASON IS THERE FOR NOT USING EXCLUDERS?

I met a man a few days ago whom we call Texas Jones to designate him from other Joneses in the vicinity. He said, "Gibson, you ought to use queen-excluders. I used them on most of my hives this year for the first time, and I got a third more honey at least from those that had excluders than I did from those that had none; besides, the labor was lessened at least one-third, for I was continually putting the queen down, and in several instances have found her back in the super in less than an hour after."

"Do you think you get a third more honey by using excluders, Mr. Jones?"

"Yes, I am sure I got *more* than a third



GIBSON'S UNCAPPING-TABLE.

The cappings fall directly on to the large screen, where they are spread out in a thin layer to drain. A thick layer of cappings means that too much honey will be left.

more; but I want to be on the safe side. The queen will fill three or four frames with brood in the brood-nest, and then go into the super, and the bees will fill the brood-nest full of pollen and a little honey so that, if she should go down again, there would be no place for her to lay. She stays in the super, and the bees crowd her out with honey until she has only two or three patches of brood about the size of the palm of one's hand, and when fall comes there are bees enough for only a nucleus, and only a part of a crop of honey secured. Practically all the work is done in one hive-body—the super. I would go out of the business if I had to go back to old conditions."

"Do the same conditions exist in Texas, where you kept bees so long?"

"Exactly the same."

"Well, Mr. Jones, I have used excluders since 1901, and my experience coincides with yours exactly. I could not say I would go out of the business if I could not have them, but I would have them if they served for only one year and I had to buy new ones each year, for I know I could produce enough more honey to pay for them, besides saving a whole lot of hard and aggravating work. The reason I asked you if conditions were the same in Texas is that Mr. Louis H. Scholl, of New Braunfels, wrote an article for *GLEANINGS* not long ago in which he stated that queen-excluders were honey-excluders. This was very different from my experience, and I did not know but conditions were different there from those here. But, as you say, they are not, it is difficult to see how such differences of opinion can exist."

However, Mr. Scholl practically stands alone in the matter of queen-excluders by the older fraternity; but notwithstanding the minority are not *always* wrong, yet I think in this case, where practical demonstration by every one is so simple, there should be no room for cavil. Won't you please take it back, Mr. Scholl? You have written so many *good* things you must not lose your prestige on so small a matter as queen-excluders.

THE FOLLY OF BOOMING HONEY PROSPECTS.

I want to put in my protest against the booming of big honey *prospects*. I notice in the *American Bee Journal* for April that Mr. Kennedy, of Ventura, Cal., has commenced it; and I am wondering what he would say to-day, April 22, after a two-days' desert wind, with fair prospects of more. It reminds me of a man who had been out on a camping-trip, and stopped at my place and asked if I had any baling-wire. Of course I had, and I remarked that his wagon-wheel tires were all wired on. "Yes," said he, "them there tires was tight when I started out, but these 'eer desert winds will shrink a six-mule-team government wagon down to a two-wheel cart in two days."

When I went to San Diego last fall to sell or contract for the sale of my honey my prospective buyer asked, "How much honey have you this year?"

I told him only one carload. "What's the matter?" said he; "every one says there is a big crop of honey this year."

I asked him if any one had told him that since the honey harvest, and he said no.

"Well," I said, "there is not more than half a crop."

He answered, "You are selling and I am buying. All reports are against you. I hear a man in your neighborhood has six hundred cases."

"I guess that is true," said I; "but he has 1400 colonies of bees, which, if he produced all of the 600 cases, would amount to about 51 pounds per colony—a little more than one-fourth of a crop."

Well, to make a long story short, I could not convince him that there was not a big crop of honey in this county, and I did not sell until a month later, when he found out the facts, and I got my price.

To those who are wondering what keeps the price of honey down while every thing else is going skyward, I would say, stop booming the *prospects* of a big honey crop. Such a course on the part of honey-producers has a tendency to keep the honey-buyers from purchasing until the fruit-packers, tobacconists, etc., have supplied their needs with sugar, cheap molasses, and glucose, after which honey has to go begging.

Jamul, Cal.

A NEW SYSTEM OF WAX-RENDERING.

Separating Wax from Old Combs, Without Pressure, by Rubbing the Refuse with Hot Water on a Screen.

BY WESLEY FOSTER.

The rendering of wax from old combs by the wax-press method is thorough if the press is made right and is strong enough; but it is a very slow way in comparison with the method we now use. Then the cost of a good press will run all the way from fifteen to twenty-five dollars, and there is much likelihood that it will not be strong enough. The burlap bag is continually bursting, and new ones have to be made every little while.

All our wax scrapings from frames and nice clean bits of combs we run in the solar extractor, and the solar refuse is run in the melter described in this article. The great advantages of this method are its speed, economy of effort, and the cheapness of the equipment. Fully twice the amount of wax can be run with this outfit in the time that was consumed when working with our press. The strength required is not as great as with the press; still, with our apparatus one needs to work vigorously. The cost for the whole thing, provided one does most of the work himself, will not be over two or three dollars.

THE FURNACE.

The furnace is built of brick or brickbats, about a foot high, and with the chimney at the same end where the door to the fire-box is located. A brick partition is run through

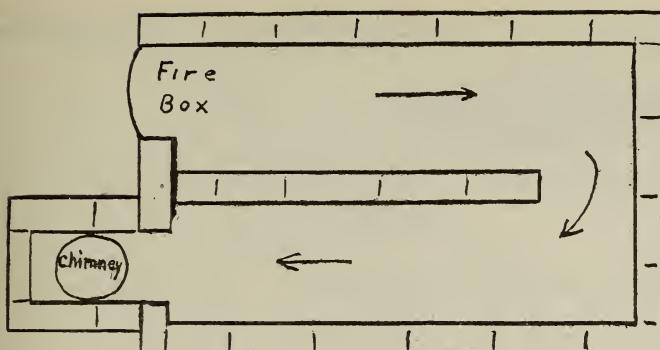


FIG. 1.—PLAN OF FOSTER'S WAX-RENDERING FURNACE.

the center of the furnace, or, rather, on one side of the furnace part, nearly to the opposite end, so that the draft will force the fire, smoke, and heat down one side of the vat on top, and back on the other side to the chimney as shown in Fig. 1.

THE MELTING-TANK.

This is shown in Fig. 2, and is made of two-inch stuff ten inches wide with a galvanized-iron bottom. The tank is $2\frac{1}{2}$ feet wide by $3\frac{1}{2}$ long. It is supported directly over the fire, and water boils in it very quickly. The board running across the tank near the center, but a little to one side, reaches nearly to the bottom of the tank, and keeps all the wax and comb in the larger division of the tank, only water being in the other part. This hot water is used to help wash out the wax when dipping the melted wax, comb, propolis, etc., from the tank into the vat shown in Fig. 3. We use lots of water, and find it essential to success by this method. The cover is made of heavy cloth stretched over a wooden frame that fits down over

on this sieve we proceed with the hoe, trowel, and an abundance of hot water to separate the cocoons from the wax. It is chopped and hoed and worked with the trowel until the cocoons are all broken and torn apart, or as nearly so as it is possible. The wax, water, and propolis with a good deal of other refuse, get through into this vat; but as there is from ten to twenty times as much water as wax, much of this will settle and the wax run off at the outlet at the top of the vat, as shown in No. 3. The outlet at the bottom of the vat is to draw off the water from this vat when it gets too full.

Sometimes when we get a very dark lot of old combs we have to run the partially cleaned wax through a second time, but with an average lot and care we can get good cakes the first time.

Perhaps I should say that, in working the slumgum through the sieve, we grind it very hard with the trowel, and, of course, this makes a thick muddy sediment in the wa-

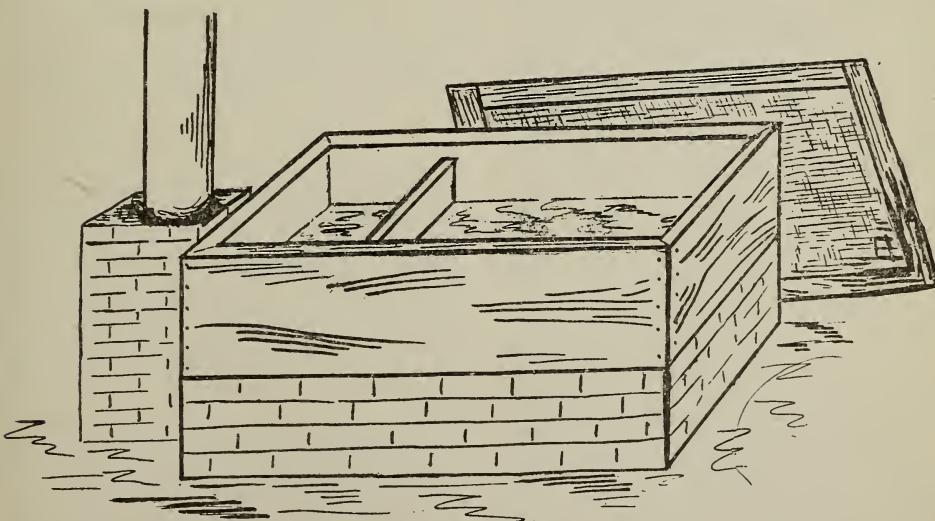


FIG. 2.—GENERAL VIEW OF FOSTER'S WAX-RENDERING FURNACE AND TANK.

the edges of the tank so little steam or heat can escape.

THE STRAINING-VAT.

This is shown in Fig. 3, and is about 7 inches deep by 2 feet wide and 3 feet long. It is the bottom of an old washing-machine fixed over for this purpose. The sieve or screen that the melted wax is strained and hoed and worked through is of very strong material, and is fitted to a heavy frame. When we get our melted slumgum

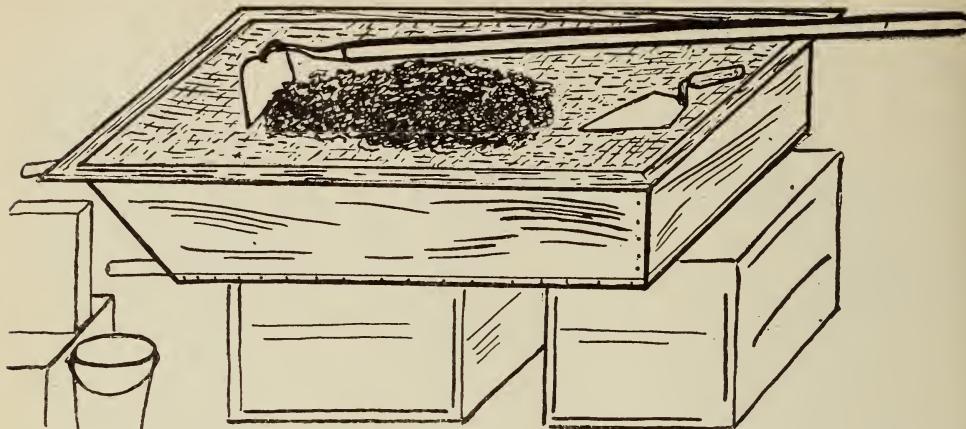


FIG. 3.—THE STRAINING-VAT WHERE THE REFUSE IS RUBBED AND HOED TO SEPARATE OUT THE WAX.

Plenty of hot water is dipped on to the refuse, and the rubbing and mixing continued until the wax is practically all out.

ter; but when the slumgum is ground this way the wax will rise and the propolis and dirt will be in the water and on the under side of the cakes of wax. There is one thing with this method that is detrimental; and that is, there is always some propolis in the wax; but this is just as true of any press-rendered wax I ever saw.

We have this whole wax-plant outdoors where there is no danger of fire, and we have plenty of room for work. We do this work on cloudy and cool days when there are no bees to bother.

THE COST OF THE MATERIAL.

If the brickwork is done by a bricklayer this will cost about \$3.00; but one can easily lay the wall up himself; and by using brick-bats the cost for mortar and bats will not be over 75 cents. Where stone is plentiful it will do just as well as brick, and will not be affected by the fire so quickly. The two-inch plank, ten inches wide, for the sides of the melting-tank, cost \$1.00, cut to size at the planing-mill. The material used was pine. The galvanized-iron bottom for both tanks cost 50 cents. A good heavy quality of iron is best to make the tanks last a long time.

The wood for the small vat does not cost over 50 cents. We used an old washing-machine, so did not need to buy this; and we had the galvanized iron left. The heavy iron sieve cost 75 cents, or about 7 cents a square foot, the mesh running six to the inch, or about that. The wire used is somewhat smaller than baling wire, but is strong enough so there is no danger of mashing through by pressing down all one's weight.

Speaking of the economy of this wax-working apparatus reminds me of what an agricultural-college expert on poultry said—many people build a \$25.00 chicken-house for a dozen hens, and would pay 15 cents for a watering-jar when a tin can would do just as well.

Much of this applies to bee-keepers. We can utilize our old washing-machines, brick-bats, etc., where it is hardly profitable to make a large outlay for a wax-working plant that is not used much of the year. If the brickbats are used, the appearance can be improved by covering over with a coat of mortar or cement plaster.

We have had so many narrow escapes from fire caused by wax boiling over that hereafter we will do all of this work outdoors.

Boulder, Col.

[If plenty of hot water is dipped at intervals on to the refuse, and the whole mass repeatedly rubbed into the screen, we see no reason why thorough work could not be done.—ED.]

SELLING HONEY TO THE RETAIL TRADE.

Refusing to Accept a Low Price is the Secret of Success.

BY C. B. SNAVELY.

The retail market attracts the small honey-producers or the one who starts in a small way, and increases his stock as his finances, experiences, or demands for his product increase. This is naturally so because he has not always enough honey to warrant a shipment to the commission houses. The above explains our position, and we have succeeded so well that now with a stock large enough to sell to the grocer or ship to the commission men we still cater entirely to the retail trade.

There are numerous ways of obtaining the trade which uses honey habitually. Our methods have been entirely successful in our locality, and we can think of no reason why they would not be applicable to any locality. The honey-consumer is what the marketman calls "fancy" trade, and this

trade is usually hard to handle. We presume that most small producers are weak on the selling end of the game, and we can imagine that their idea would be to have some good man to whom they could take their honey and receive twenty cents or more a pound, or sit at home and write a few postals to real nice people who would promptly send Sambo with a check for the honey. It is not thus that success is won. During the last three years we have had considerable experience in selling honey to the family trade, and the only way we ever succeeded in obtaining a customer was to go right after him. The personal face-to-face interview captures the trade. From this form of selling most small producers shrink; or, if they do try it, one or two rebuffs send them back to the postal cards. To sell any thing by the personal-contact plan you must know all about your goods, and use every effort to arm yourself with answers to all questions.

First, we insert a small well-worded advertisement in our local weekly paper, costing about 10 cents an insertion, laying particular stress upon the fact that our honey is of superior quality, being left on the hives until thoroughly ripened. The advertisements served their purpose, for they certainly did great work. Quite frequently, when called upon the people would say, "Yes, I'll take some; we saw your advertisement in the paper." It can be readily seen that the people had more confidence in us and our product, and all on account of a small ten-cent advertisement. With a little advertising, face-to-face talk, the use of the circulars, "Food Value of Honey," by Dr. C. C. Miller, and only first-quality goods, a good trade can be worked up.

We presume that many GLEANINGS readers (through the advertising of *Farm Journal*, of Philadelphia, in a campaign to get subscriptions) are aware of the fact that two men on a New Jersey farm selling eggs made a profit last year of over \$12,000 from 1953 hens, or \$6.41 profit per hen. The secret of this big profit is not so much the method of production as the impressive fact that the two men (one of whom must be that rare type of producer who knows how to sell) sold their eggs as high as sixty cents a dozen—never less than forty cents, and at an average of fifty cents. We know the two New Jersey men would not make \$6.41 profit per hen selling to a grocer at Lititz; but we admire them for finding the sixty-cent market among the high liverers of New York city.

The honey-producer should take these facts home, and post in plain sight. It is the price at which he sells his honey that makes his success great or small, or puts him out of business entirely. Any one who is intelligent enough to get twenty cents a pound or more for his comb honey is intelligent enough to keep bees properly. Ability to sell is nine-tenths of the business.

In conclusion we will say, bee-keepers, don't forget that no one is interested in your getting good prices for good honey but

yourself, and also remember that the only way to get good prices is to refuse to sell at low ones.

Lititz, Pa.

HEREDITARY INFLUENCES.

The **Swarming Tendency Can Not Be Eliminated Any More than Lambs' Tails Can be Shortened.**

BY M. E. PRUITT.

Geo. W. Williams, referring to swarming, in GLEANINGS for May 15, page 321, says: "What a boon it would be if we could eliminate this troublesome tendency! But can we do it?" I should say, no, not any more than sheep-men can cause ewes to produce lambs with short tails. Haven't they chopped them off for generations and generations? Aren't they just as long as they always were?

I fully agree with Leo E. Gately, pages 322, 323, May 15, and I can't for the life of me see where the editor gets the "external conditions" from. Mr. Gately refers entirely to "internal conditions" when he says "surrounding influences," I think.

For the last several years we have kept down swarming by raising the major part of the brood and giving frames with starters in the place of it, so arranging the upper frames of brood that they do not come exactly over the lower ones. We do no "dumping on the grass," as Mr. Gately so comically puts it.

CHICKENS, AS A RULE, EAT DRONES ONLY.

Now, I don't see that it is so remarkable that a chicken eats drones and not workers. What is remarkable is the fact that they have sense enough to learn the difference. Nearly all our incubator chickens will go to the yard to get a meal. We used to feed drones daily to them when they were little tots. In their greediness to gobble every thing that fell they would occasionally grab a worker and get stung. That lesson was learned right there and then, that some of those juicy morsels had fire in them, and that some did not; and they soon learned to distinguish them by the sound of the hum. Little chicks can be easily trained. One lesson or two at the most is enough to teach them any thing that is within bounds.

WHEN TO DRIVE THE END-SPACING STAPLE.

Everybody seems to have trouble driving the staples in the frames; and it seems to me they must put them in after the frame is built. We put the staple in the end-bar first, and then build the frame. The saw-kerf block sent with the knock-down frames is placed on the end-bar, the open end of the saw-kerf being flush with the bottom of the notch made for the top-bar. We are careful always to have the V edge of the end-bar toward us, holding the same in the left hand with the top end of the top-bar pointing to the right hand. The shorter point of the staple is placed toward the right

hand, with the longer flush with the closed end of the saw-kerf. The staple is then driven (with a light hammer) until almost flush with the block. Others may use this method; but if they do they do not so express themselves in words or illustrations. See Mr. Scholl's illustration, page 372, June 15, for instance. Where the staple is put in first, one has something solid to hammer on, and the frame is not weakened, as is bound to be the case to a greater or less extent with the other method.

WHO PAYS THE COST OF HONEY-CANS?

As to "who pays the cost of the cans?", June 15, page 392, why, the consumer, of course, just as he does when buying coffee, lard, or any other product that is sold in cans. We either charge enough extra per pound for the honey to cover the cost of the vessel, or sell the full weight of honey and vessel, selling both at the same price per pound, or collect a similar vessel in the place of it and knock off a pound of the total weight. We get the price of the vessel or its equivalent in any case.

Eola, Texas.

BEE-STINGS AND RHEUMATISM.

What is Rheumatism? Are All of the Reported Cures Permanent?

BY DR. A. F. BONNEY.

As Editor Root says, "Dr. A. F. Bonney * * * has stood almost alone in his contentions that bee-stings will not cure rheumatism." Among bee-men, yes; but possibly not among doctors, although I have had a deal of trouble to get evidence against even my own side of the argument. For the edification of Mr. Root and others, who persistently write about different kinds of rheumatism, I wish to call their attention to the following definition:

"It (rheumatism) is to be separated as of distinct (possibly of bacterial) origin, from joint affections caused by gout, plumbism, scarlatina, gonorrhea, septisemia, tuberculosis, or syphilis."

The definition further says: "The word (rheumatism) is used with a certain and unfortunate freedom in application to joint pains of various origins and anatomical forms."

This definition is from the Century Dictionary, and alludes to muscular and gonorrhreal rheumatism as other forms. The muscular type of pains are not rheumatism, but myalgia, "a morbid state of the muscles, characterized by pain and tenderness. Its pathology is obscure." Which means that we call it "rheumatism," but we do not know what it is. The other form, the gonorrhreal, is called gonorrhreal rheumatism because the swelling of the joints in those afflicted looks like the swelling caused by rheumatism.

Leaving out these two forms, if for no other reason than that the bee-sting treat-

ment is recommended for the inflammatory type alone, there remains but one type of disease known as rheumatism, according to the Century Dictionary and the medical lexicons, and that is articular rheumatism, variously rheumatic fever and inflammatory rheumatism. A continuation of the disease produces forms called chronic articular rheumatism and progressive chronic articular rheumatism; but as these are but a continuation of the original causation they can not be called any thing different.

A summary of the above will read: There is but one disease known to science which is called rheumatism, and that is what is variously called articular rheumatism and inflammatory rheumatism. Muscular rheumatism may be of the same origin. Gonorrhreal rheumatism is of so rare an occurrence that I never saw a case and never expect to; and it is not rheumatism—at least as we are discussing it. Now we shall go a step further, and show you a case of the disease. Listen to a world-wide authority:

Acute articular rheumatism, an acute febrile disease, with pain and inflammation of the joints as prominent symptoms. * * * * It often begins suddenly, a number of joints are usually attacked, one after the other; the fever is irregular; there is apt to be profuse sweating; endocarditis, pericarditis, pleuritis, sudamina, erythema nodosum, hyperpyrexia, and delirium, are more or less frequent features of the case. Its duration is from one to six weeks or more.

I doubt if any layman ever got opportunity to apply bee-stings, or any other treatment, to an *acute* case of rheumatism.

I now append a letter from the Doctors Wright, Coon & Hoenes, which really needs no comment. However, I might call attention to the fact that hundreds of persons are wearing iron rings which, they assert, relieve rheumatic pains; others carry potatoes and horsechestnuts with equally good results.

Dr. A. F. Bonney.—We received yours of the 9th, and read the clippings. Neither Dr. Hoenes nor myself has had any experience with the bee-sting cure. It does not look reasonable, and yet the only proof either for or against must be in actually testing it in a large number of cases. The advocates seem to have a little the best of the argument, because they claim favorable results from trial, while, so far as I have seen, the opponents do not point to any test they have made. I am not impressed with the statements of the advocates of bee-stings, because I have so often seen other "cures" recommended, and very highly praised by unscientific parties, when a careful test showed there was nothing to it. Talk by the average man or woman about so-called cures is likely to be very unreliable. The main comment that occurs to me is that it looks to me quite risky to allow the sting or any other part of an insect to penetrate the skin. There is no way of protecting from poisons in addition to the ordinary sting poison.

Denison, Iowa, July 13.

W. T. WRIGHT.

I have written to almost every case reported to have been cured which I could get track of. Mr. Landis claims still to be free from disease; but I could not get to hear from Dr. Buck (?), the man who advised him to try the remedy. Some do not reply; but a letter from Mrs. Mary Rutmbeck concludes: "May be you can tell me a good remedy that will benefit me; should be glad to know of any thing." I shall state briefly that the lady was not

cured, as Mr. Pryal's article, p. 19, Jan. 1, would lead one to think, though she may have been somewhat relieved.

When we stop to consider that there are literally millions of cases of rheumatism, real inflammatory rheumatism, in the world yearly, and only here and there a cure of (often an unknown disease) gout, lead-poisoning, or other joint trouble by bee-stings, I claim the evidence is insufficient.

Buck Grove, Ia.

THE DIFFICULTY OF GETTING RID OF FOUL BROOD.

Is it Not Probable that Mr. Stewart's Bees did Not have the Genuine American Foul Brood?

BY GEORGE M. STEELE.

On pages 417 and 445 Mr. Stewart tells his experience in reference to American foul brood. Now, I believe that his statements are incorrect concerning the care of this disease, for I am absolutely positive that he is mistaken in the disease he is treating, for it can not be the old genuine American foul brood. In and around Philadelphia we are having trouble with foul brood, and for five years I have been trying to clean it up.

I have shaken bees on strips of foundation, and in 35 days the disease appeared on the combs. I have also shaken on full sheets of foundation only to have the disease appear again. Only yesterday I was going through the bees belonging to a friend, and I found three hives out of five that had been shaken this spring, during the heavy honey-flow, that were as much diseased as they were before being shaken. Now, if any combs that have ever contained honey or brood in American foul-broody hives are used again they will surely carry the disease. Dr. Phillips has distinctly told all bee-keepers that he has subjected American foul brood to boiling water for a considerable time, and to the strongest antiseptics known to *materia medica*, and the spores of American foul brood seem to thrive under all the disinfectants known to man. Therefore I feel assured that Mr. Stewart will have to retract his statements, as there are no bees in the world that can clean outropy brood having the bad odor of American foul brood. I can furnish infected combs from a colony that has been queenless and broodless for twenty days, and a microscopic examination will show that the bees attempted to close the cells with propolis.

The publication of these articles, I feel sure, will be the ruination of a large number of small bee-keepers throughout the diseased districts of the United States. I have a yard of something like sixty colonies in Chester County, forty miles from Philadelphia. I have control of all the bees within five miles of this yard—in fact, I have examined all the apiaries in Chester County, and I feel sure that the American foul brood has not arrived in this county. It seems more than likely that Mr. Stewart

must have either black brood, commonly called European foul brood, or pickled brood, or possibly even chilled or starved brood, which shows in any large apiary in early spring during the violent changes of weather that we usually have.

I think that the Alexander treatment is correct for the European foul brood; but I have found but one way of entirely getting rid of American foul brood, and at the same time save the bees and secure a crop.

If you are sure that you have *American* foul brood make a bottom-board bee-tight by nailing a strip across the front. Nail with staples an empty hive-body the same size as the hive to be treated, to this prepared bottom-board. Bore a $\frac{1}{8}$ -inch hole in front of this hive-body very close to the bottom-board. Over this hole tack a long funnel-shaped piece of tin with a small entrance just large enough to admit the passing of one bee, making sure that no bees can enter between the hive and the funnel. At the beginning of the honey-flow go to the diseased colony; set it aside, and put a new hive-body, containing full sheets of foundation with a queen-excluder, between it and the bottom-board. Pick up each comb separately from the diseased hive, and look for the queen. When found, place her in the new hive on the old stand and put the cover on. Pick up each comb carefully; put in the hive with the funnel entrance, as mentioned above. Then remove all debris, such as the hive-body, bottom-board, etc., that the bees have been shaken from, and carry it to the honey-house as quickly as possible. It would be well to let all adhering bees on the old hive-body and bottom-board get out through the escape in the honey-house. Be very careful to shake no dirt or cappings in front of the new hive.

This hive previously prepared with the funnel entrance which contains full brood-combs should be put in such a position that all the bees leaving it will come very close to the entrance of the new hive containing the queen. Wait 35 days, then carry the diseased mass of combs, without looking into the hive, to the honey-house. If it is desirable to save the honey in the combs they may be extracted if great care is used to prevent robbing, and if none of the honey from any of these combs is spilled on the clothing so that field bees can get to it. After extracting the honey the combs may be rendered into wax.

The plan as outlined above is the only one that I know of that will cure American foul brood. I hope that no one will take offense at what I have written, but I feel sure that I know what I am talking about. If Mr. Stewart will send me a piece of his American foul-brood comb, and also a comb that he has extracted the honey from, which previously had the disease, I shall be pleased to test it. I will place it in one of my clean colonies in Philadelphia, and watch developments.

30 South 40th St., Philadelphia, Pa.

Heads of Grain

from Different Fields

Honey from Acorns ; Exorbitant Express Rates ; Importance of Ordering Early.

Some years ago my brother (who is a bee-man) while working in his field near the edge of a strip of timber noticed some bees on a white-oak tree. On making close examination he found they were gathering something out of an indentation around a small tear on the lower end of the acorns, and in a few minutes that little cup would fill up again. The acorns that the bees were working on were very dark in color; but the green ones were passed by the bees. Then about one or two years afterward he noticed this same oak-tree and found it was dead down within twelve or fifteen feet of the ground. The owner cut the tree down before it was entirely dead. Please inform us what it was the bees were getting, where it came from, and if the bees killed the tree.

Again, I wish to state a little experience I had this spring, not for my benefit now, but because it may benefit some one else and prevent him from getting into the same trouble I did. About the 21st of May I sent an order to Cincinnati for a peck of buckwheat, to be shipped by express to Newport, which is $8\frac{1}{2}$ miles from my place. On the 27th I was notified that it was in the express office. I sent my oldest boy on horseback to get my buckwheat. The card I received from the express agent did not state what the charges were, so I handed my boy a dollar and told him to pay the express charges and bring back the change; but, lo and behold! on his return he informed me that there was no change for me. Well, I will not undertake to describe my feelings and tell all I said. If I had known that the express company was simply going to steal and rob in such a way I would have ordered one bushel to come by freight, and what I did not need to sow I could have fed to my poultry.

Now, Mr. Editor, is there any way by which the public can stop this wholesale stealing and robbing by these notorious express companies? You take this case, and, of course, it is a small matter; but just see—the article cost 40 cents, and then they charged me one dollar to haul 12 or 15 lbs. just from Cincinnati to Newport.

Newport, Tenn., July 16.

L. B. VINSON.

[We are unable to give you an opinion regarding honey from oak-trees; and as we have never seen any thing like it we do not know to whom we could apply for information.

In ordering supplies from any distance, unless there is very great urgency it is better to order them by freight; and this illustrates the importance of *ordering early*. If the express companies were not so shortsighted as to charge such excessive rates they would secure very much more business than they now have. While the rates would be lower, of course, it is our opinion there would be greater profits in the aggregate from the increased volume of business. Under the present conditions there is not much we can do but grin and bear it. We hope that some day the interstate-commerce law will have provisions regulating express rates. If Uncle Sam would put into operation a parcels-post system the express companies would immediately meet his rates, and even then they would make money by doing it.—ED.]

Washing Honey out of Cappings, and Feeding it Back to Comb-honey Colonies.

I am not using the capping-melter this year up to the present time, but may use it later on. I have a plan that I like very much for home yards where one can be on hand every day to attend to the necessary manipulations. I let the cappings drain two days and two nights, stirring them up once or twice during that time. I then wash them, using as little water as possible. This is done by placing the cappings in a butter-tub, well packed down, and pouring on some water. This water, after the cappings have soaked in it a short time, is sweet enough for feeding, and I feed it back at night to colonies working in comb-honey supers, using the

Alexander feeders. In this way I get all the honey out of the cappings, and what drains out is of better quality than it would be if run through the melter. In handling amber grades of honey, the melter would be all right; and for outyards I would use it at all times in order to keep cleaned up. This sweetened water could be used for making vinegar, of course; but not every bee-keeper has sale for vinegar; and if so, it is not all profit, as the barrels cost quite a sum. The reason I had not tried this plan before is because it had never occurred to me to feed back during the height of the honey-flow until I read Alexander's book.

To get off my subject a little, I shall have to acknowledge that comb-honey production does not pay me at present prices as compared with extracted honey. I have a great plenty of nice store combs, and my bees will put 40 lbs. of honey in a set of extracting-combs in about the same time it would require them to fill a 24-lb. super. I have only four colonies working in sections at present.

Bridgeport, Wis., July 6. HARRY LATHROP.

Bees on Shares—who shall Pay for Extra Labor?

In running 500 colonies of bees on shares, what would be a fair agreement between the two parties when the person running the bees has to have a horse to ride around to the yards? Which party should own and feed the horse? In case where there is a lot of painting to be done, and covers and bottom-boards to be made, should the man running the bees make them, or should the owner of the bees have them made?

Hayneville, Ala., July 16.

A. B. BROWN.

[In keeping bees on shares it is the usual rule for one party to furnish all the labor, and the other to furnish all the supplies, except that each one of the parties pays for half the sections, shipping-cases, square cans, or barrels. At the end of the season both parties share equally in the honey and wax. As the painting of the hives—or, in fact, making new ones—would not in any way increase the honey crop, it would be fair for the owner to make this an extra, and allow extra time. Of course, if the other party will agree to do extra work, and if this could be shown to be necessary to produce a crop of honey, well and good; but as a matter of equity and justice, the one doing the work should, in our opinion, have additional compensation for painting the hives.

As to the feed and care of the horse, the owner of the bees should pay for the feed and the rent of the horse; and the other party should do all the work, including the care of the horse. When there are 500 colonies it will be necessary to have a complete equipment, and that equipment would include a livery horse and wagon, an automobile, or a motor cycle and a livery.—ED.]

Does Black Color Irritate Bees, or is it the Rough Texture of the Clothing?

I just read the article by Mr. Baldensperger, page 409, and must beg to differ regarding the effect of color on bees with reference to flowers; for I have noticed that, when there are flowers of the same variety, of different colors, such as hyacinths, crocuses, wall flowers, etc., the bees visit them without regard to color.

As to irritation, I think it is not so much the darkness as the roughness or hairiness. I believe that the instinct of bees leads them to attack any thing that resembles their natural enemies, such as bears, coons, etc. They do not fly at the black net of one's veil. A dog approaching a hive will be attacked at once; but a person in a smooth black coat will not. Do they sting negroes more than whites? I had an assistant once who wore a rough dark-blue coat, and in a few minutes it was completely speckled with stings. When he changed it there was no more trouble. I sometimes wear a smooth dark coat when working with the bees, and do not find that they notice it at all.

Metchosin, B. C., July 11.

W. FISHER.

Only Young Queens do the "Piping."

"Piping" is never done by the *old* queen. If I should hear this before the first or prime swarm issues I would conclude at once that the first swarm from that hive had either absconded or that the queen for some reason had died some two weeks previous; but if the swarm had left without being

noticed, with the old queen, of course, as she always comes out with the first swarm, unless, as before stated, she has died a short time before.

I have been a bee-keeper fifty years, and I know of no sure sign when to look for the first swarm; but I can tell positively when to expect any swarm after the first. In seven or eight days after the first has issued, I think not sooner than that, and it may be nine days, and then if a second or third or more are to issue you can always hear the young queens, usually two or three days or nights before they come out. The older they get before swarming, the louder they pipe. I have often heard them several feet away from the hive. When I had only a few swarms I was always listening for this signal of a second swarm. There are often two or three piping at once. Remember, it is only the *young* queens that pipe, and nearly a week after the first swarm.

Gaines, Pa., July 13.

A. DEWEY.

The Sound of the Queen Made Only Before the Issuing of the Second Swarm.

When I was a boy in Scotland my father kept bees in the old bee-skep. We always heard the queen give a sound of "yep-yep," only before the second swarm came out. I have kept bees in this country for twenty years, and have heard them, I don't know how often. As, a rule, if you listen the seventh and eighth night after the first swarm issues, and hear the sound, a second swarm will come off the next day. If a third comes off you can hear the same sound one or two days after the second.

Sebring, O., July 18.

W. F. BARCLAY.

How to Maintain a Drone-rearing Colony.

In maintaining a drone colony for late queen-rearing, is it necessary to take the queen away after she has filled the drone combs with eggs? Must they be kept queenless?

Batesville, Tex., July 10.

R. I. ERSKINE.

[In the case mentioned a queen would not lay in drone-cells unless the colony were fed or there was a light honey-flow on. After there are eggs in drone-cells the queen could be removed, and the bees would continue the work of rearing drone brood. A better way, however, and the one we use, is to keep feeding our drone-rearing colonies. These must be fed continuously; for to skip one day would mean the destruction of a lot of valuable drones.—ED.]

The Townsend Plan of Using Extracting-frames in Comb-honey Supers; the Advisability of Wiring Extracting-frames.

In the June 1st issue, page 348, there is an illustration of Jay Smith's use of the Townsend plan in Dangenbaker supers. Do you not think that the extracting-frames should be made with a vertical bar in the middle, so that a third super-spring would hold the fences in place? or would it be too much bother in extracting? Would you advise equipping all supers with these two extracting-frames, or only the first super to be put on each colony? Would it be advisable to wire the foundation into these frames?

Wellsville, N. Y., July 1.

C. N. FRANCISCO.

[We would not advise the use of a vertical wooden brace in the middle of the extracting frame as you describe. One objection to it is that it would consume too much valuable space right in the center of the brood-nest; and then we imagine it would interfere somewhat with the work of the uncapping-knife.

We would not advise equipping all supers with extracting-frames on the Townsend plan nor any other plan until you try a few to see whether you like them. Such supers are handy to have at the beginning of a honey-flow. After the bees get started to going above, it is not so necessary to have the extracting-frames.

We would wire all frames, whether shallow or full-depth, if you desire to use them for extracting.—ED.]

Italians More Immune to European Foul Brood.

My bees are diseased with European foul brood. Two years ago I was troubled with the same disease. I shook them and requeened them with Italian queens, but they proved to be wrongly mated. I have been advised to requeen them this year with Italian queens, without shaking. Do you think

this advisable? Do I run any or much risk in introducing queens without shaking? and if I do shake I am afraid my bees will not have gathered enough material to furnish them their food through the winter. Which do you consider the best strain of Italian bees? We thought of choosing between the golden and the long-tongued red-clover stock, but do not know which is the better.

Ithaca, N. Y., July 9. M. W. VAN DE BOGART.

[It would be advisable for you to requeen if your stock is hybrid or black. Experience shows, unquestionably, that pure Italians will resist European foul brood much better than hybrids or common blacks. There is no need of shaking again if the colonies are cured; but if the disease has reappeared we would advise shaking and Italianizing. This would be a good time of the year to do it; and should there be a dearth of honey at the time of shaking we would advise stimulative feeding at night or toward night. The buckwheat flow which is to follow ought to put your colonies in good condition for winter.

As between the golden and long-tongued red-clover strain, we do not know that there is any difference in the power to resist disease. Ordinarily we would advise just standard leather-colored Italian stock.—ED.]

How Long after Planting Basswoods will they Begin to Yield Nectar in Quantities?

Kindly write us at once, giving prices, and state when we can get basswood-trees, and also advise us in regard to planting the same. How long before we could expect a flow, and how many trees would it take to furnish a surplus for 600 colonies?

Brooksville, Ky., July 14. WALLIN & CORLIS.

[It would take in the neighborhood of twenty-five years for a grove of basswoods to yield nectar in quantity large enough to take care of any considerable number of bees. We put out ten acres of basswoods nearly forty years ago, but this grove has never amounted to any thing for the production of honey. Basswoods, in order to do well, should grow with other trees in a forest. Basswood-trees when used for shade in city streets yield considerable nectar. The reason for this is probably the fact that the soil is not used up too much. It would not pay you to put out the basswood grove, if our experience is any criterion; but in about ten years basswood shade-trees will begin to yield some nectar. Trees five years old will yield a few blossoms; but a hundred acres of them would not supply very much nectar to fifty or one hundred colonies, let alone six hundred.—ED.]

Why the Buckwheat does Not Yield Honey.

My bees (Carniolans) do not work at all upon my buckwheat. I have made four different sowings at intervals of two weeks, and the last sowing is now in full bloom, and my bees have not worked upon any of the sowings at all. A man living five miles distant, who keeps native black bees, tells me that one year he sowed buckwheat and his bees avoided it entirely.

Archey, Ark., July 11.

A. W. CALLAM.

[Buckwheat, while a heavy yielder of honey in some localities and in some seasons, furnishes no nectar in others. A good locality may furnish no honey from buckwheat one year, and considerable the following year. This is true of practically all the honey-plants of any importance.

Regarding buckwheat, there are a few localities where the conditions of soil are such that it never yields honey, or at most a very small quantity.—ED.]

Combs Infested with Moth-worms.

I have four or five frames of honey infested with moth, and my hives are weak. Would it be safe to feed? Can I destroy the moth by any means?

Summerland, B. C., July 9. F. W. BENTLEY.

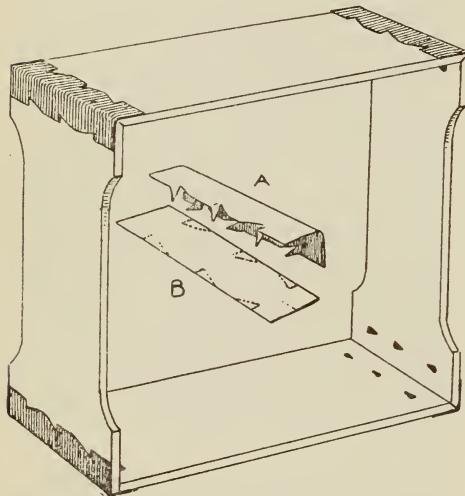
[If you have combs infested with moth-worms you can take a knife and cut out the galleries, including the ugly pests, and put the combs back in the hive. You can then feed, when the bees will repair the mutilated parts of the combs. You can not destroy the moth-worms when they are in a hive of live bees by the use of any drugs or process of fumigation. To avoid trouble in the first place, introduce Italian blood among your bees and you will find there will be no further difficulty.—ED.]

Metal-cornered Sections.

Large quantities of the one-piece sections never see service because they are broken in folding. Of course, if only one corner is broken the whole box is lost. If the wood is steamed or wet before being folded the loss is less; but at the same time the lock corner is likely to swell so that it goes together very tight. Then when the heat of the hive dries the wood this corner shrinks and pops apart, making the section of honey unsalable. If a super of nice honey can be loosened of propolis, and all the sections taken out without a ten-per-cent breakage, it is better than I have ever been able to do, although I have had many years of experience.

After the cleaning of propolis, hundreds more are broken. I do not know of any thing so irritating as to get a section all clean but the last corner, and then have this corner break. Then when placing the sections in shipping-cases some of them are not entirely square, and in pressing them in they are squared up. If the corners hold the honey is cracked, hence the necessity of no-drip cleats, absorbent paper, etc., in the bottom of the cases.

At the clean-up of my last apiary of 120 hives I gathered up about two bushels of broken sections that had never been used on account of the breakage, and this was not anywhere near all of them.



The illustration shows clearly the metal reinforcement that I am using to prevent the breakage. Separate pieces of sections can be put together with these corners, and made just as substantial as an unbroken section. Of course, when the metal corner is on, the danger of breakage is avoided.

Sections so prepared will cost more, it is true; but they *should* cost more, for breakage is prevented, and the present weak section becomes a strong one. The bevels at the corners are drawn solidly together, and held there, regardless of how roughly a section may be handled when folded, when being put in or taken out of supers, or when being scraped of propolis. This means that more comb honey can be produced.

Minneapolis, Minn.

GEO. W. MAXWELL.

Ridding a Colony of Laying Workers by Removing it from its Stand.

There are many bee-keepers who are bothered with laying workers, and who have no good way of getting rid of them. During this season I have had a good deal of experience along this line, and have had a great deal of trouble in trying to make the bees accept a queen. If laying workers have just started it is no trick to introduce a queen at all; but after they have been in the hive for some time a queen will not be accepted. The only successful plan that I have read of is to divide the colony—that is, distribute the combs of bees around among other colonies; but this plan is not desirable when one wishes to increase his number of colonies, I have hit on a plan that has been a success in every

case where I have tried it. One of the colonies, which had eggs and drone brood in every cell in the former brood area, finally accepted a queen all right.

Remove the cover of the hive containing laying workers; take out half of the frames and then put on the cover again. Shake or brush the bees, from the combs removed, in front of the entrance of the hive, then put these beeless combs in another hive to use later. After all the shaken bees have gone into the hive, move the colony about 18 inches to one side, and on the old stand place the hive containing the combs removed, as mentioned before. All the fielders will leave the original laying-worker hive, and, returning, will enter the empty hive containing only the combs from which the bees were shaken.

About 24 hours after this moving is done, the colony will be ready to accept a queen, which should be introduced in the regular way. After the queen is laying, add a comb from the laying-worker hive every day with the few bees on it, or, preferably, the remaining bees in the original hive can be killed and the rest of the combs given at once.

I am satisfied that this is the only way of getting rid of laying workers that have been in a hive for some time and saving the colony. Some may have no confidence in this method; but all I ask is a trial.

Elmendorf, Texas.

ALFRED L. HARTL.

No Foul Brood in Yakima County, Washington.

In the summer and fall of 1909 there was a report that foul brood existed in an apiary in the neighborhood of North Yakima. In the spring there were additional reports of the same character in the same neighborhood and in other sections. A sample of the so-called foul brood was exhibited at the April meeting of the Washington State Bee-keepers' Association. Some of the members pronounced it foul brood; others thought it was not, judging from the apicultural authorities; and in view of the fact that the assembled members could not definitely show that it was foul brood, the president of the association requested that two members submit samples from these hives to Dr. E. F. Phillips, at Washington, D. C. One member sent two samples, and the following report was made:

The two samples of brood, No. 1067, which you sent for examination, show no evidence of disease in either case. I certainly hope that European foul brood does not reach you.

E. F. PHILLIPS, in Charge of Apiculture.

The other sample sent showed a light case of pickled brood. This shows conclusively that foul brood does not exist in this part of the county and State.

At a meeting of the Washington State Bee-keepers' Association held in June, the secretary was instructed to send this report to the bee-journals of the country, in regard to the absence of foul brood, as the report that foul brood may have gained some headway, and it would prevent the growth of the industry in the State. J. B. RAMAGE, Sec'y.

Meeting of Lebanon Bee-keepers' Association.

The Lebanon Bee-keepers' Association held their annual summer meeting Thursday, July 21, at the apiary of John S. Shope, Annville, Pa. W. S. Killeffer spoke on the value of pure stock. Mr. Killeffer is a very able speaker, well capable of holding the attention of his audience. E. S. Hacker spoke on "Fruit-growing and Bee-keeping." A very interesting feature of the meeting was a discussion of the various honey-plants—such as sweet clover, heartsease, smartweed, aster, etc. The association has seventy-five members enrolled, and in spite of the fact that the honey crop here is a short one, members are eagerly devising ways and means to get best results with the least labor expended in the future.

Lebanon, Pa.

E. L. BROWN, Sec.

A New Way of Selling Candied Honey.

In a grocery store at Webb City some fine extracted alfalfa honey candied on them, and they were unable to dispose of any of it as candied honey. Finally they cut the top off the can, put a glass plate over it, tied a big label, "Honey Butter," on the side, and sold it out readily at 15 cts. a pound.

Carthage, Mo., June 5.

B. C. AUTEN.

Our Homes

By A. I. Root

I am a jealous God, visiting the iniquity of the fathers upon the children unto the third and fourth generation of them that hate me.—EX. 20:5.

In California and Florida, and many other places where the people have been in the habit of making footpaths through the woods and fields, it is often customary, when one buys a piece of property, to run a fence across the highways and thoroughfares—that is, where no street has been properly laid out. While Mrs. Root and I were in California several years ago we started home crosslots after dark by a well-known path. As it was late, and I was in a hurry, I was pushing ahead rather rapidly in the dark; but as I was familiar with the well-trodden path I did not expect any obstruction. It seems, however, that somebody had bought a piece of land, and run a fence right through, to start a chicken-ranch; and the frail poultry-netting was so invisible that I did not see or think of what had been put right across the pathway since I had been along in that direction. Before I knew it I had plunged into the netting with such force that it threw me back into the dirt like a ball. Of course, I was more astonished than hurt; but the bruises were sufficient to vex me as it was; and I was still more vexed to see Mrs. Root shaking with laughter. I think I asked her, somewhat impatiently, if she proposed to indulge in such merriment if I broke my bones or got killed. I think she declared she did not laugh until she saw me stand up and was apparently all right. Recently down in our Florida home I walked off our porch in the dark, and almost went down on my head on the hard cement pavement I had recently made. And she laughed at that. Now, do not imagine that I am putting up a *complaint* against Mrs. Root after all the good things I have said about her in years past. I simply wish to illustrate her fashion of laughing at accidents similar to these I have mentioned. If anybody is really hurt she is not only the readiest person in the world to help relieve suffering, but she knows what to do about as well as anybody I know of to ease the pains and trials of life.

Just one more illustration, and then I am ready for my moral.

I have several times mentioned our good neighbor, the Rev. Mr. Ten Broek. Now, neighbor T. is an old man like myself, but he is an Episcopal minister. Well, when he came over to our house one day last winter, slowly limping along, and announced that he had fallen off the roof of his house, Mrs. Root laughed again. It seems that the roof of his cottage needed some shingles; and as he was alone, the good man, even if he is seventy years old, thought he

could go up and fix it without troubling his neighbors. If it had not been for the growth of tropical grass, briars, etc. (such as I have described in telling about his Northey berry, on page 333, May 15), his fall might have been something more than a laughing-matter; but his comical look when he announced his mishap, together with the idea of a *preacher*, and an Episcopalian at that, rolling off the roof of the house into the briars, set Mrs. Root to laughing again and again. I think he protested a little, and inquired something as follows:

“My good woman, why do you laugh? Suppose I had been killed—would you still laugh about it?”

“No, no, Mr. T. I would not laugh if you had been killed; but what I am laughing about is because you were *not* killed, and apparently not very much hurt; and we are all glad to see you able to come over and tell us about it after it is all over.”

“But I am bruised and hurt, even if I was not killed.”

And then we both busied ourselves in offering him courtplaster, euticura, and every thing else. Let me now digress.

There is one among our grandchildren who has had, all his life, a fashion of laughing, sometimes uproariously, whenever any *sort* of accident happens. If there is any trouble with the automobile he laughs as if it were great fun, even though it stops progress on the journey; and although his parents have often reproved him for his fashion, or for his queer ability to see the ludicrous or ridiculous part of every occurrence, it does not seem to be of much use. The other night in coming home from church we had to make a long trip through a patch of woods after dark. I told Leland that, without the experience I had had in times past in following that path through the darkness, I should not be able to do it. So I took the lead. We came through all right and in sight of our home; but just as we were rejoicing almost at the very threshold of the door, we got out of the path and into a thick underbrush, and had quite a time in climbing over rotten logs and into the thicket until we gained our home. Leland got tangled up away out in the woods until I feared he would get beyond my hearing. He said I was wrong, and I said he was wrong; and it was really the blind leading the blind, and we were both “in the ditch,” or at least almost hopelessly tangled in the brush and among the rotten logs of our wild wood around the cabin. Well, Leland laughed as usual. With his boyish strength to surmount obstacles it was more of a laughing-matter to him than to me. We finally reached the cabin door. Then it occurred to me that the key I had in my pocket would not work in the door before us. I had to get in by going round to the door on the other side. In order to get there I had to pass, in the darkness, the stump of one of my beautiful apricot-trees. After it had just begun to bear, all of a sudden it died; and in chopping it down and

getting it out of the way in a hurry I left a sharp stump sticking up. Right here is a moral. When you cut down a tree, especially around your home, cut it off level with the ground, so that nobody may be hurt by falling on it in the dark or at any other time. Well, I blundered over that stump, and skinned my shins so that they needed quite an application of courtplaster and cuticure, and then Leland laughed again as usual. Of course, no one knew I was hurt when he laughed; but the idea of his grandpa blundering over that stump after having tired himself out by climbing over logs and lumbering through bushes within a rod or two of his home, was sufficient to provoke his keen susceptibility to any thing ridiculous.

In our previous Home paper Satan suggested that my grandson need never know any thing about the thing in question and that it was really none of his business. Since the time of Adam, I suppose fathers have excused themselves for doing certain things they would not have their children do by the specious philosophy that the *children* would never know any thing about it, or *need* not know any thing about it. Sometimes we (or at least *some* of us) say that certain things which have transpired are known only to ourselves and to God. Is this true? Does any thing ever happen in the lives of any of us, especially those of us who have children and grandchildren, that can be concealed from anybody but God and the one who commits the sin or permits a sinful thought to enter his mind?

During the past year or more I have told you about my new discovery in poultry, etc. Well, I have just made a new discovery in regard to sin and Satan. I suppose we are not altogether responsible for our dreams, but I have discovered that we are, at least to *some* extent, even for the things we dream about. Dreams are a reflection of our waking hours; and we are certainly responsible, or at least largely so, for the things we *think* about. Now for my illustration or discovery. When I spoke to Mrs. Root about laughing at accidents I did not mean to censure her. It is a splendid thing to be able to look pleasant, and even smile when trouble comes. I am sure it is God's will and wish that we shall trust him enough to smile when unexpected obstacles block our way or even give us pain. We are told of some great and good men who could even indulge in harmless pleasantry when they were approaching death. This ability to take things in a cheerful way, and laugh at calamities, is a wonderful virtue if taken in the right spirit.* Well, I

* Mrs. Root's happy faculty of catching on to the ludicrous, even when on a bed of sickness, may have had at one time in her life a very beneficial effect on her health. She was very low with pleuro-pneumonia, and our excellent trained nurse thought it best to rouse her up a little at one particular crisis. When we were all tiptoeing about the house to avoid disturbing her, all at once I heard her well-known ringing laugh, although faint, of course, on account of her sickness. Fearing it was caused by delirium I cautiously went in

do not know that any one of our five *children* shows this peculiarity that I have mentioned; but in the *next generation* it comes out, as we often see it illustrated with poultry and other domestic animals, when this peculiar trait comes to the surface again.

Sometimes in traveling in a place where I am sure I have never been before, things have a familiar look, and at times I can hardly make it seem possible that I have not at some time in my life been in that very place. Others have spoken and written in regard to this. I have sometimes wondered, when I was in a region where my father passed his early days, if it were not possible that I inherited, if that is the word to use, the memory of things that happened during *his* life. If this is true, and if indeed it is possible that children are impressed, not only with the things we do, but with the very *thoughts* we permit to take possession of our hearts, should we not be exceedingly careful? If a parent has fallen into the habit of giving way to his temper, is it not likely that his children and grandchildren will give way in a like manner? When somebody has a touch of insanity, how often people inquire, "Was his father or uncles or grandparents thus afflicted?" And very often it transpires that insanity or other things have been running in the family. There is a great mass of evidence showing that an intemperate man curses his children that come after him; and it is so great that I shudder to touch it. May God help us to consider, when we are tempted to give vent to any feeling, whether good or bad, to say to ourselves, as Bro. Reed said to me over forty years ago, "Mr. Root, do you want to see your boy grow up *exactly* such a man as you are?" Now, then, when you are again tempted to think no human eye sees what you are doing, or that none but God knows what you are *thinking*, consider that possibly generations yet unborn not only see but are likely to copy your very *thoughts* and *actions*.

THE SUNDAY SCHOOL TIMES.

Some years ago I told you that, if you could not afford to take more than one periodical, you should take the *Sunday School Times*; and I have been studying over this piece of advice for several years, and have also been "studying" the *Sunday School Times* since then. I think I added, when I

when she laughed again, and in a perfectly natural way, because I seemed so surprised and startled. It seems the nurse, while giving her her medicine had managed to tell her a little story; and that story was about a man who absent-mindedly put a wooden toothpick back into his pocket after he had used it. His wife called him to order by saying suddenly. "Here, sir, what do you mean by putting that toothpick in your pocket after having used it?"

In his effort to make it appear that he really did know what he was doing he replied, "Why, my dear wife, I was just saving it up to give to some poor fellow."

This well-timed joke, purposely managed by the nurse, roused her up from her stupor, and she began to gain at once from that time forward.

made that remark, that, if you could take only two papers, you should subscribe for the *Rural New-Yorker* next. When I met the editor of the *Rural* in his office in New York some time afterward he laughingly alluded to it. He said he took our journal and showed it to his wife, and said the only thing he had to complain of was that I did not put the *Rural* first. But his wife said that A. I. Root had got it *exactly right* as it was—"Seek ye first the kingdom of God and his righteousness," etc. Well, a few months ago the *Sunday School Times* had an editorial about the importance of tackling first of all the job you have most dreaded. It said, in short, that the way to be happy is to pitch right into the most disagreeable task that lies before you, and finish it *first* and get it out of the way. I neglected to clip this out and use it for *GLEANINGS*, although I intended to do so; but after taking the above advice a good many times lately I felt so good over it that I am sorry I can not give you all of that sensible editorial. Now here is just one more that indicates the high character and good sense that seems to stand out strong and clear in every issue of that good old standby:

SELF-EXALTING SCIDICE.

Self-exaltation never exalts a man, but always lowers him. Not only do others think less of him when he tries to impress them with his greatness, but he himself is less of a man every time he attempts this. It is only part of the inexorable law that, if a man seeks his life, he shall lose it; but if he is willing to lose it he shall find it. When a neighbor learns of something that is highly creditable to us, but learns of it indirectly, without our having had any part in telling him, his opinion of us goes up. If we ourselves go and tell him of that same thing, in order to impress him with what we have done, although the thing itself remains unchanged, and is just as creditable as ever, nevertheless our telling of it is not creditable, and his opinion of us goes down. How slow we are to learn this! How we do hurt ourselves by trying to help ourselves! Many a good man who is really a great man is marring his goodness and turning his greatness into pettiness by going after this will-o'-the-wisp of reputation. The self-sought reputation is self-destroyed. When we die to self, and leave wholly to God the impression that our life may be creating in the minds of others, our reputations will steadily improve. "For God resisteth the proud, but giveth grace to the humble."

Since *GLEANINGS* was started it has been my privilege to make the acquaintance of many great and good men—men who are working for the kingdom of God and his righteousness, and not to lay up treasures in this world where rust and moth corrupt and where thieves break through and steal. Some of our old readers may remember A. F. Cowles, who has the Bible Truth Depot at 1002 Louisiana St., Williamsport, Pa. Dr. Cowles is preaching sermons by sending out spiritual tracts, and I wish every reader of *GLEANINGS* would send for the one he has just sent me, entitled "Captain Levi." As he prints these tracts free of charge and furnishes postage, without any help except that which God may move the hearts of the people to send him, it will not be at all

amiss if you send him a stamp or two to pay postage; and after you have read the little tract I mentioned, may be you will feel inclined to send him something more than stamps—at least I did.

My Dear Bro. Root:—It has been a long time since you have heard from me; but I thought that you would be glad to know of the increased service which is in our hands in these later years. The work has grown so that it reaches all over the world now. There are three of us employed in the office now regularly; but we have not room enough to do the work justice, and are looking to the Lord to put up a two-story building, and, if the Lord will, to put in a printing-outfit, for we have such difficulty in getting our printing done in the wordly offices. If you could see the letters that come in to us telling of blessing received through the printed ministry you would be glad that you have had the little fellowship in this service in sending us all these years *GLEANINGS*. We have enjoyed it much, and thank you much for it. There were many things that I should like to have sent you—rich spiritual truths—but I knew that your time is much taken up, so have refrained from doing it. Yet you will take the will for the dead in this. When I get a rich nugget of gold in spiritual truth I like to pass it on to others that they may be helped also.

Our letter-writing is over 300 a month, sometimes running over 350, and while the strain upon us is very great at my age, 77, the Lord keeps us in the most perfect health and strength. We do not get weary as in former years. This is the Lord's strength imparted to us. We trust to continue this service for a number of years, if the Lord tarry.

Praying his blessing upon you with all spiritual good that you may be filled with the knowledge of his will in all wisdom and understanding,

Gratefully yours in our Lord. A. F. COWLES.

Notes of Travel

By A. I. Root

FLORIDA IN THE SUMMER TIME.

To-day, July 26, I have been here just a week; and although the temperature has been most of the time between 80 and 90, we have had summer showers more or less every day, and cooling breezes from off the Gulf of Mexico almost all the time, day and night. Occasionally mornings the day starts out with a temperature along in the 70's, and one morning it was down to 72; but the nights are, as a rule, near 80. A few times about noon, before the clouds come up, we have it above 90; but 94 is the warmest I have seen it so far. I have never heard of a sunstroke in this region. For the first time in years I have put my fur cap and summer overcoat clear off out of sight, and I confess I greatly enjoy the lightest clothing, and going about in my shirt sleeves, and much of the time bare-headed, outdoors as well as in the house. A sort of catarrh, grip, or hay fever, that has followed me for years, has apparently gone clear out of sight.

I have been told repeatedly that there is little or no gardening here in July and August, and this is to some extent true; but there are some things that grow beautifully during the much rain and high temperature. It is the man as well as the climate here, as well as everywhere else. For

instance, Mr. Rood has beautiful crops in all stages of growth, of beggarweed, velvet-beans, peanuts, and last, but not least, strawberries putting out rank thrifty runners and making as fine thrifty plants as I ever saw in the North. These plants are to be planted out soon, to bear his crop of berries, ripening about Christmas and later on. He pulled up a hill of peanuts that I should say had hanging to the roots nearly a couple of quarts (and they are good to eat green too, as I can testify). As I never saw beggarweed before, I was astonished to find it a very pretty bean that stands up without any pole, about as high as your head. It makes excellent hay, as does the velvet-bean.

Now very soon celery seed will be sown in the seed-beds, for the crop next year; in fact, some has been sown already, I am told. Sweet potatoes grow at any time, and *always*, and, what is more, you can leave them in the ground as long as you choose, and they will just stay there in good condition until wanted. One potato will often make several meals, and these great big fellows are fine eating too, I can tell you.

Neighbor Abbott planted quite a patch of pole lima beans some time last winter. Well, he has been picking and selling beans for months past, and the vines are now loaded with blossoms and little pods. Although planted about the usual distance apart, the vines have reached across from "pole to pole," until the whole garden is a tangled thicket. They are on a sort of swamp that he has drained off, so they withstood the drouth before the rainy season came on.

The peaches grown here are fine; and the mango, which I have just sampled for the first time in my life, is a most delicious fruit. Somebody once said they tasted like "turpentine and cotton batting," and there is a certain aromatic *resinous* flavor (which I very much like), and around the great seed or stone is something like cotton batting, and this latter makes it a sort of mushy business to eat one. I don't know how that fellow would manage to eat one who "always mussed his ears when he ate huckleberry pie." I generally take my mango out on the grass, near the wash-basin and napkin.

When I first got here California apples were 40 cts. a dozen; but next day the genial grocer informed me they had just received some nice Georgia apples at only 60 cts. a *peck*. They were small but fine. By the way, the Cleveland *Plain Dealer* has for some time been quoting early apples at 90 cts. to \$1.00 per *bushel*, and yet the eating-houses all along the way down here wanted "three for a dime." How much of this *dime* does the *producer* get? We don't use much meat here at this season; but when we can get beautiful salt-water fish, enough for two or more meals, for 20 or 25 cts., who *wants* any meat? Of course, chicken and eggs are always close by at our home, and we have nice Jersey milk every morning at 10 cts. per quart.

THE DISAGREEABLE THINGS ABOUT FLORIDA IN SUMMER.

I think I have heretofore spoken of the sandy roads in Florida; but during the rainy season there is very little trouble about the roads, and just now around Bradenton we have the very finest roads in the world, made of crushed stone, rolled hard and smooth, and then *oiled*, so there isn't a particle of dust or mud either. They are just perfect for the automobile. Well, I really don't know of any thing disagreeable just now but the *insect* pests, and they really *are* pretty tough on both people and chickens. There are almost *no* house-flies at all around *here*; but my brother's good wife may deserve some of the credit; and mosquitoes have been troublesome only a few mornings and evenings. This evening I sat and read on the porch quite a long time, and not a mosquito or gnat came near. The worst thing I know about Florida is the "red bugs." As a rule I believe they do not trouble old residents very much; but new comers, if they go out in the woods much, or through tall grass, weeds, or brush, are sure to get them. I never saw the "critters," and I am told they are almost invisible they are so small; but their bite affects most people much like the poison of certain plants, say poison ivy. Sal soda, ammonia, or kerosene will seem to neutralize the poison, and the smell of kerosene will, it is said, act as a repellant, as I have before mentioned. Put it around the tops of your shoes, as the ankles are the principal points of attack. Stick-tight fleas also pester people; but they do not poison or produce swelling like the red bugs and mosquitoes. They dig into the flesh, however, and must be got out with tweezers or with the point of a knife.

I believe all these pests are much worse in the dry-weather period. They breed in dry sand; and when the rainy season comes on they mostly di-appear. I found none on myself all last winter, and so far none this summer; but they are very bad just now on the newly hatched chickens. Various salves are offered for sale; but my brother thinks any *grease* just as good, and he has had the best results from the fryings of fat pork. A very little on the head of the chick, where they may be seen, will induce them to "let go" soon. Here is something from a Medina Co. boy who has had many years of experience in Florida in regard to the matter.

PROSPECT RIDGE FARM

J. N. PARKER, PROP.

POULTRY, VEGETABLES
FRUIT : AND : HONEY

WEST PALM BEACH, Fla., July 23, 1910.

I see your brother has had trouble with chicken fleas. I want to tell you how to get rid of them. Get acetilene lime. It is what is left in making acetilene gas. Sow it liberally in and around your chicken-house, and in the nest-boxes; and pile up a bushel or two in the yard for them to wallow in, and I will guarantee you will not have any "jiggers," mites, or lice.

J. N. PARKER.

I notice friend Parker advertises "day-

old-chicks" at 15 cts. each, so there is at least one man in Florida in the day-old-chick business.

Health Notes

By A. I. Root

I hold in my hand two publications that have given me very much satisfaction. The first one is "Directions for Living and Sleeping in the Open Air." It is put out by the Metropolitan Life Insurance Company. This company, as I understand it, insures the lives of sick people; and after they have thus insured them it is a pecuniary object to have their patrons keep well, especially to live and not die, because when they die they have to hand over a lot of money. Well, I must confess this is the first time I have ever considered and clearly comprehended such a scheme for "making sick people well." The pamphlet is by Thomas Spees Carrington, M. D., and it is about the most sensible thing on the subject I ever got hold of. The author talks open air from beginning to end with a vengeance; and the pictures of arrangements that can be constructed or adapted to almost any dwelling at a low price are worth more alone than some books that cost \$1.00, say new systems of poultry-books for instance. I was especially attracted by a sort of woolen cap that covers the face, neck, and every thing but the mouth and eyes. If I were to sleep outdoors in freezing temperature it is just exactly what I should want. This great insurance company has at its command the very ablest talent in the line of medicine that the world can produce, and they have no nostrums to sell; in fact, the book is a vehement protest against attempting to cure tuberculosis and other kindred diseases by the use of drugs and medicines. Good food, pure water, and outdoor pure air first, last, and all the time. I do not know whether the book is sent free of charge or not. You can tell by addressing Metropolitan Life Insurance Company, New York. By the way, our good friend Dr. S. A. Knopf has assisted in preparing this pamphlet. May the Lord be praised for the progress that the whole wide world is making in stamping out the great white plague.

Now, the other book that has greatly pleased me is "Preventable Diseases," by Woods Hutchinson, M. D., who, like the pamphlet I have mentioned, advises open air for tuberculosis, typhoid fever, malaria, and every thing else. As Dr. Hutchinson is an allopathic physician he endorses the use of medicines, but to only a very limited extent. It seems the whole wide world as well as doctors of all and every school are beginning to believe prevention is better than cure, and they are fast getting into a line pretty nearly parallel to what T. B. Terry has been so vehemently teaching, if not altogether so. This beautiful book con-

tains over 400 pages, and it brings the matter of scientific and intelligent medicine clear up to the present date, touching on almost every thing that produces sickness, pain, and death, as well as the preventable diseases as colds, tuberculosis, diphtheria, malaria, headache, nervousness, and winding up with mental influences in disease. Price of the book is \$1.50. Address Houghton, Mifflin & Company, Boston, Mass.

ONLY TWO MEALS A DAY, ETC.

I inclose a clipping from the Norwich *Bulletin* of June 27. It says the no-breakfast fad started in Norwich 17 years ago. Such may be the case as to Norwich; but I began the no-breakfast habit ten years earlier, merely because of lack of appetite for that meal, and before I had ever heard or read of any one else doing so; but some years later I read Fowler's "Science of Life," in which he stated he had lived 15 years, I believe, on one meal a day. At one time I lived for about two years on one meal a day, but often ate a light lunch in the evening, and my weight kept at the usual place the same as when eating two or three meals a day. Now I and my family eat at about eight and five o'clock each day, and probably eat much more than is necessary.

The following is the clipping referred to:

"The omission of breakfast in the interest of health started in Norwich 17 years ago, and since then has become nearly world-wide. It is now in vogue in Japan, China, Australia, and New Zealand, and has been accepted by some eminent doctors in civilized lands. The following paragraph is clipped from a recent copy of the Sydney, N. S. W., *Stock Journal*, the editor of which recovered his health and has become 70 years young, instead of 70 years old, in consequence of this practice:

"A man who undertakes to eat only when he is hungry will soon find that two meals a day are ample. A fair lunch in the middle of the day, and a very light dinner at night, is plenty, or, better still, a tea. Then his household will be happy and healthy, and his own life will be free from disease. He will see the sun shining as it never shone before, and life will tingle through all his veins as it never did since his careless boyhood; and his women-folks will have time to look around and wonder at the glory of God's fair earth."

"The evidences are ample that this 'gospel of health' is a living gospel."

Packerville, Ct., July 7.

E. P. ROBINSON.

YELLOW SWEET CLOVER BLOSSOMING WITHIN 60 DAYS AFTER THE SEED WAS SOWN.

Noticing what is said on page 421 as to the early maturity of yellow sweet clover, I have a yet bigger story to tell. Last fall I bought some sweet-clover seed of you, both white and yellow, and about the first of May gave some of the seed (mixed) to my neighbor, Mr. Lillibrige, who sowed it in his garden. The yellow is now about two feet tall, and has been in blossom for the past two weeks. We can not be certain as to the date of sowing; but Mr. L. and I are quite positive the clover was in blossom within sixty days after sowing. I have traveled over quite a bit of Eastern Connecticut and Western Rhode Island, and have seen sweet clover growing in but one place, except as above mentioned, and that was near the railroad station at Montville, Ct. I have not succeeded well with sweet clover, but have done well with alfalfa. The white sweet clover sown by Mr. L. has not yet blossomed. Packerville, Ct., July 6. E. P. ROBINSON.

The above corroborates what we have said, that yellow sweet clover, as a rule, blossoms much sooner than the white.

SWEET CLOVER FOR HAY.

We clip the following from the *National Stockman and Farmer*, written by Mr. L. Roudebush, of Clermont Co., O.:

H. S. C., of Mt. Gilead, O., asks: "Will you kindly let me know what the feeding value of sweet clover is, and if there is any place in this country where it is sown for hay? If so, please let me know the num-

ber of crops that are cut per year and the average yield."

Sweet clover is a native of the elevated and arid regions of Western Asia. For years it has been thought to be of little value—a weed by most farmers. It has been used as a soil renovator, and to furnish bee pasture by a few until quite recently. In the northern part of the limestone belt in Kentucky, which borders on the Ohio River, it has been and is being grown quite extensively for pasture, seed, and hay. It seems to be peculiarly adapted to this section. Being a legume it delights in a limestone soil, and, apparently, the harder the better. For hay our experience is limited to one year. It is a pure biennial, and ordinarily can be cut only once. Ours was cut when the blossoms first appeared, though it may be cut very much sooner, and some years you might get a second crop. Our yield was at the rate of five tons per acre. We found it hard to cure properly, and harder to handle, as much of it was from 7 to 8 ft. in height. As to feeding value, I find no data. My horses ate it with great relish, and made splendid gains. It is laxative, but does not affect the kidneys as does clover or alfalfa. I would give it a value for feeding stock a little above red clover—am still experimenting with it. One farmer in this county sowed 45 acres last March, and a friend in Central Kentucky 250. I think its greatest value is as a soil renovator, and, incidentally, for pasture for live stock and honey-bees.

Poultry Department

By A. I. Root

MORE ABOUT THE KELLERSTRASS WAY: THE OTHER SIDE OF THE QUESTION.

Mr. A. I. Root.—In regard to Mr. Kellerstrass and his winning only one first out of 24 entries it is only natural if what Mr. K. claims is true. He claims that his birds were waylaid on account of the snow blizzard, and so were not in show condition when they arrived at Madison Square Garden. From there he went to Baltimore, and, with his birds in the pink of condition, won every first prize offered. Now, we do not know what kind of stock Mr. K. has; in fact, we never had any dealings with him; but if his birds were not in condition, as he claims, he was not in the race. Condition means all in showing birds. We have known men to go to the show-room with really first-class birds, but have known others to go with birds inferior to the former in every respect, except condition, and win over the former; and still further, if Mr. Jones will take the trouble to look over the poultry journals he will see that Mr. K.'s customers are winning right along, which shows that there must be some breeding back of them.

In regard to Mr. K. copying his writings, we do not have his book; but it seems to us that there is really a little more "fuss" in all the poultry journals than seems necessary.

As stated before, we never have had any dealings with Mr. K., but gave you a few facts as we know them, so you can have a look at both sides. It is only fair, and we know you would have it so.

Yours for the chickens every time,
Lititz, Pa., July 29. SNAVELY TROS.

After having visited the Kellerstrass plant and inspected it, and met Mr. K. himself, I have credited him with deserving his success. Although I can not doubt your personal statement as to the "almanac," I still think your correspondent may be mistaken as to Mr. K.'s claims concerning winnings at Boston, etc. I recall seeing Kellerstrass' statement to the effect that "Kellerstrass White Orpington" had won certain places where I understood him to mean stock of his strain. People here advertise and talk of "K." stock in that way, and are understood. I have no interest in the matter except that of fair play. Hope your correspondent will look into the matter thoroughly and report.

Oklahoma City, Okla., July 22. G. I. GORDON.

Mr. A. I. Root.—In the June 15th issue of GLEANINGS I read with interest your papers including your comments on Kellerstrass' catalog. I agree

with your feelings of resentment of any business man charging a price for his catalog, be it much or little. I paid Kellerstrass for his book, and felt that he was simply a grafter for getting money in that way. I also bought some of his eggs at \$30.00 per 15, and got seven chickens out of the 15 eggs; 5 eggs were infertile, and 3 chicks perished at not over the fifth day of incubation.

The eggs were set under a splendid White Rock hen, and under conditions that were highly favorable in every way for a good hatch. I also sent to Wm. Cook & Sons, Scotch Plains, N. J., and got 25 of their best eggs and set them under another fine White Rock hen. Both are as ideal hens for hatching as could be desired, and make the best of mothers. From Cook's 15 eggs I got 10 fair chicks; 3 eggs were infertile, one died early in the process of incubation, one egg was broken about the 15th day, and had a chicken well advanced in it. By comparison of the two lots of chickens I believe the Kellerstrass chickens are going to surpass the others in every way, although I am keeping them under exactly the same conditions, on free range, pure water, fresh-air homes, and plenty of wholesome food. I wrote Mr. Kellerstrass of the results of the hatch; he ignored my letter entirely. His literature intimates that he will make good, etc.; but Kellerstrass is in the business for what there is in it. He is an astute advertiser. In all his methods he shows adroitness. There are several things in connection with his literature that might throw him open to censure by discerning people; yet I believe that his stock is of superb quality and of splendid vigor. The seven chickens I have give every evidence of great vigor and vitality. As a foundation stock they will no doubt prove to be cheap, even at the price they cost me.

I wish you would write to Ernest Meiere, Secretary and Treasurer of the American Orpington Club, Flushing, L. I., and ask for the club's catalog; you will thereby, no doubt, see that Kellerstrass would not dare to claim in the way of winnings what the club and competitors knew he did not win, as they would expel him peremptorily, and also throw him out of the club. I have been trying for a long time to get foundation stock that was entirely free from hereditary disease, and I believe I have succeeded in the Kellerstrass stock.

Cleveland, Ohio. July 30.

WM. B. HESS.

Special Notices by A. I. Root

THE WYANDOTTES—ANOTHER POULTRY-BOOK.

The poultry literature is getting to be something fearful. The poultry-books, to say nothing of the periodicals, would make quite a library of themselves. In my hand is a nice large poultry-book, beautifully gotten up, and it is all about the *Wyandottes* and nothing else. There are eight kinds of Wyandottes all together; and this book is devoted entirely to a discussion of these eight kinds. There is nothing said about poultry-houses, and not much about feeding poultry. It is all pictures of the birds and pictures of the feathers. By the way, there is one colored plate of the *Partridge* Wyandotte that is almost worth a dollar of itself to frame and hang up in a room. The price of the book is \$1.00. There are 160 pages, 9x12; the book is published by the *Official Poultry Journal Publishing Co.* Quincy, Ill., or Buffalo, N. Y.

"RED SHOES" AND "YELLOW NOSES."

Is any thing prettier, in the whole domain of nature, than a newly hatched chick? Yes, a newly hatched duck. Our good friend, Kent Jennings, of Mt. Gilead, O., was kind enough to send me 15 eggs of his choicest strain of Indian Runner ducks about a month ago; and to-day, July 18, ten very lively little ducks with the most comical and bewitching "red shoes" are delighting the babies, "Jean" and "Katharine," and some older ones. No bootblack ever got such a taking "shine" on any pair of shoes; and their bright and inquisitive eyes, with the comical yellow bills, are "too cute for anything." They are already sampling rolled oats and milk with great gusto; and as I am just off for Florida, "grandma" must look after their rations for a while.